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Vol. 33
No. 19
Whole
No. 1570

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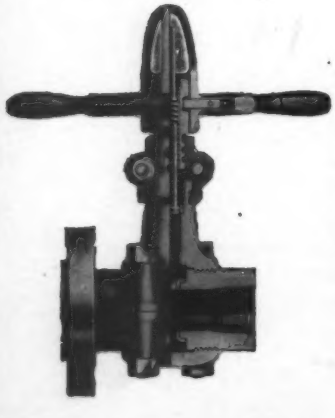
* Available in 2, 3 and 4 inch sizes — 6000 lb. test pressure.



Cross-Section View of a Cameron Flex-Seal Mud Valve. Note that the body is made in two pieces to facilitate replacement of the flow-way insert. The two-piece body is held together by four studs and is sealed by lips made integral with the flow-way insert.

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CALIFORNIA
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and Petroleum Industry

THE AUTHORITY ON THE CALIFORNIA OIL INDUSTRY

FIRST ISSUE
OCTOBER 1940
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October 9, 1940

Telephone Number Richmond 2136

An Outline of Personnel Requirements In the Petroleum Industry

By H. T. Wyatt and
F. R. Schmieder
Shell Oil Co., Inc.

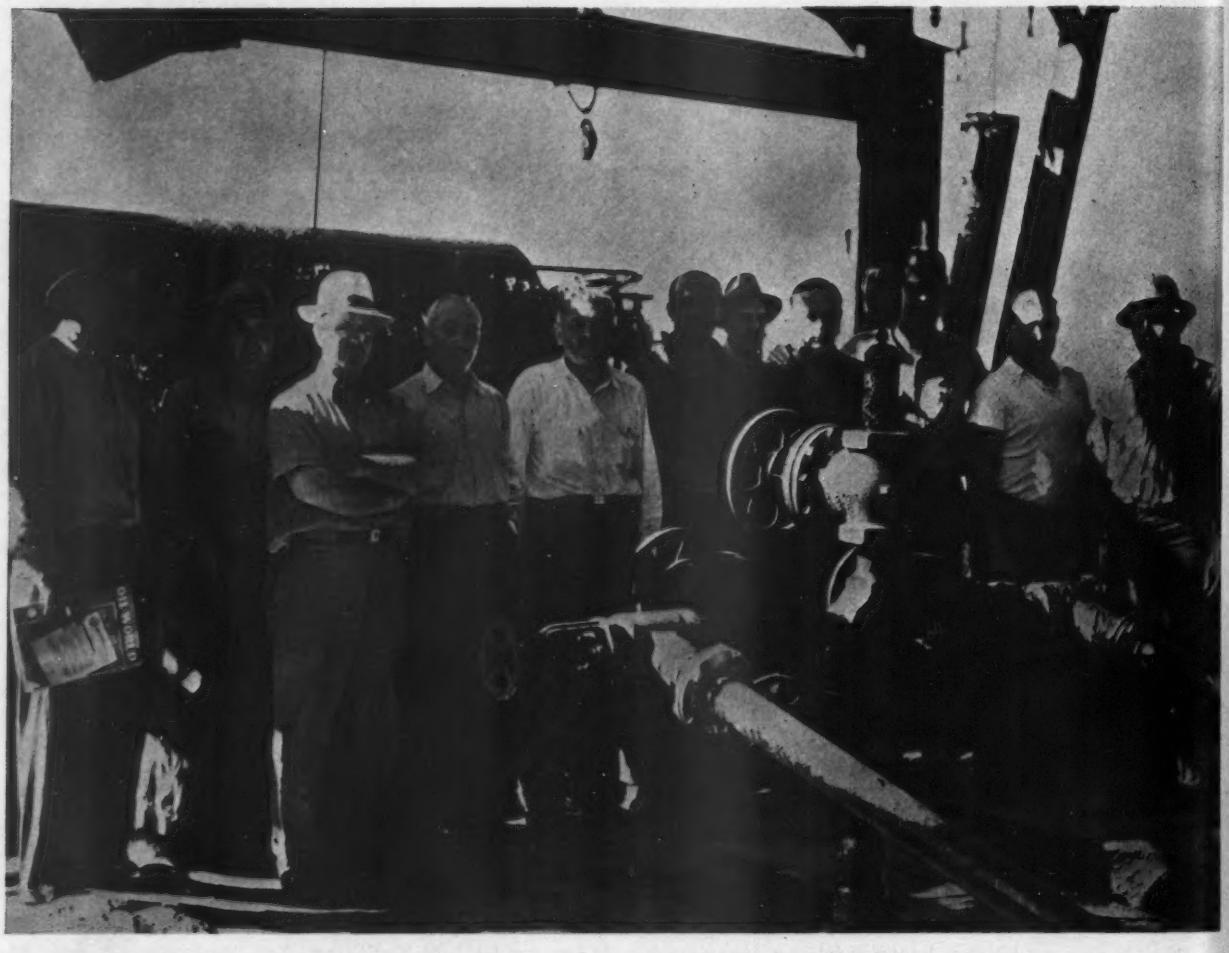
According to Webster, an "engineer" is one versed in, or who follows as a calling, any branch of engineering—thus, we are not to dispose of Mr. Webster so easily, and upon examining his definition for "engineering" we find this to be, originally, the art of managing engines: now the art and science by which the properties of matter and the sources of power in nature are made useful to man in structures, machines and manufactured products.

With the academic definition of an engineer in mind and assuming that engineers are the chief concern of this presentation, we may now proceed to define those personnel requirements of the petroleum industry with reference to the producing and transporting of crude petroleum and natural gas.

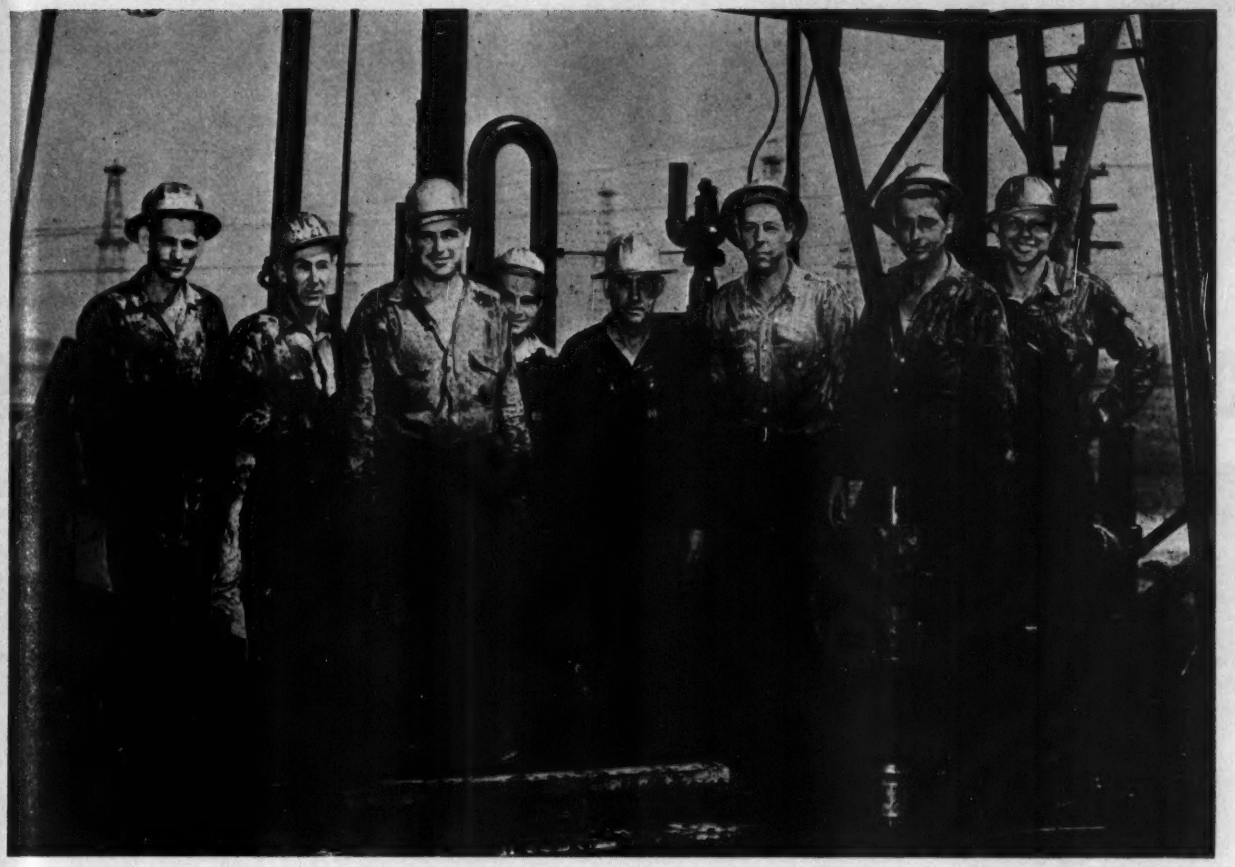
The part of the petroleum industry which we have under consideration is, in simple terms, concerned with three basic lines of endeavor, namely, (1) research, (2) planning, and (3) doing.

"Research" work may be undertaken either in the search for and development of new ideas or in answering specific problems. Research in the petroleum industry is undertaken in both laboratory and full scale or oil field basis.

The "planning" phase of petroleum production has to do with formulating ideas as to the most desirable methods and time for exploitation of oil structures, and also as to the selection of methods of producing and transporting crude petroleum and natural gas involving the combined application of en-



On the disturbed and dusty topography of Santa Paula in the South Mountain Area, these California Securities Oil Co. officials and drilling crews are hoping to add a bright spot to Coastal district oil prospecting history. Whether or not Schieferle No. 1 will prove a real new zone discovery remains in the balance. On the rig floor when the well began to flow by brief heads were pictured Dom Conterno, Jim Marchetti, Col. Rubenstein, Bert Brunwin, Tom Moore, Willard Moody, Whitey Wallace, Earl Ballard, Horace Brown, Al Witt, Tom Mobley, A. Wike, and H. C. Barnett.

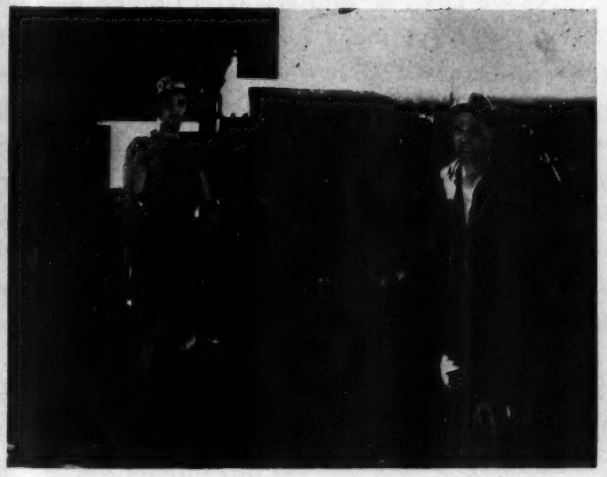


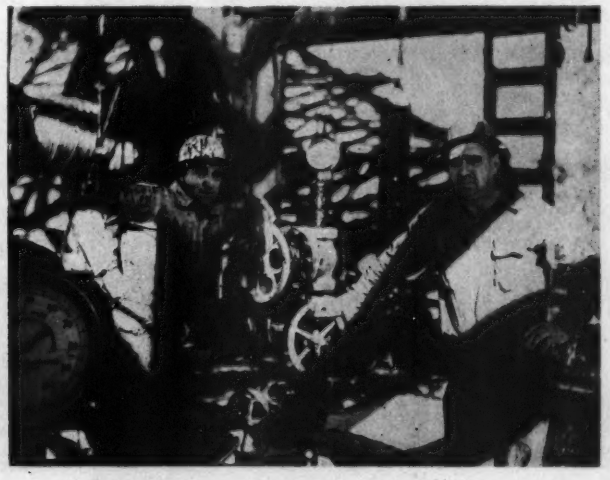
At Union Oil Co.'s Callender No. 81, the crew: Ray Dysinger, Charles Berry, Arthur Sitton, Ralph Cobine, and Homer Tidwell, are making way for a quaintly appelled crew made up of T. J. Page, Ed Giblon, and Ray Ellis, who will run sucker rods to pump the disappointing edge well.

gineering and economic understanding.

The "doing" phase is simply the execution of plans so formulated. It will be understood that research may be necessary for either "planning" or "doing."

The educational requirements for those personnel to be engaged in these three phases necessarily are quite different. In our opinion, those individuals who are to carry on research work successfully for the petroleum industry must have comprehensive university training along scientific lines. Whereas, the required educational attainments for research can be secured only through college training, technical high schools could be expected to satisfy an appreciable part of the





Among those wondering what they have at Schieferle No. 1, at Santa Paula, are, left to right, Roy Morgan, Blackie Deshazl, Horace Brown, and Earl Ballard.

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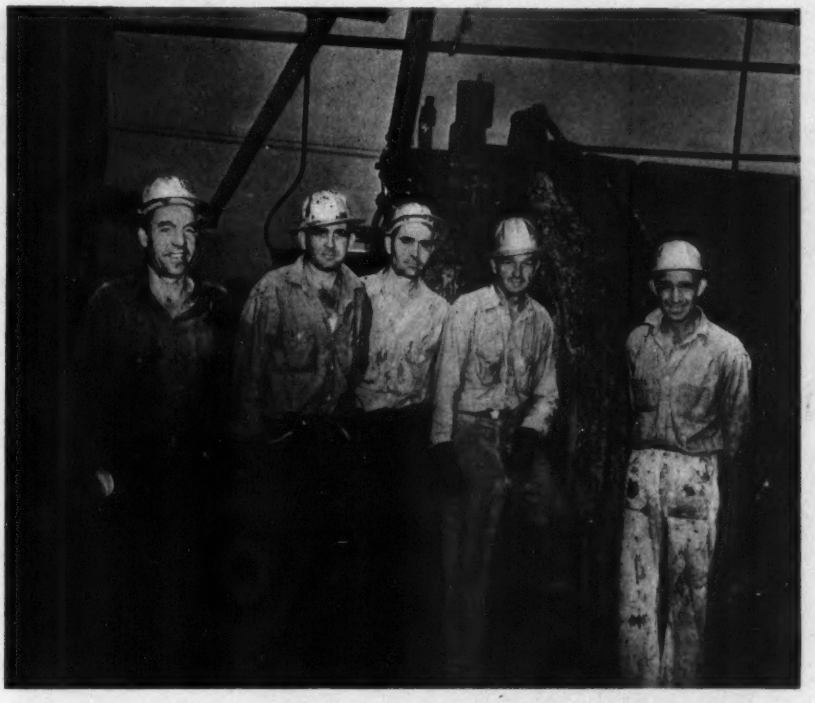
WORK TO BE DONE

Educational Requirements	Research	Planning	Doing
	College (100%)	College (70%) Technical High School (30%)	College (5%) Technical High School (50%) Grammar School (45%)

educational requirements for those engaged in the "planning" and "doing" phases. It should be recognized that the ratios of numbers of personnel employed for the "research," "planning" and "'doing" phases are about in the order of 1:10:100, respectively.

The above tabulation is presented to set out schematically the educational requirements corresponding to the type of work to be done and an attempt is made to show numerically the relative importance of grammar school, technical high school, and college training for the personnel engaged in the petroleum production industry. As may be seen from this tabulation it is suggested that 30% of the educational requirements for planning could be met by the technical high school, leaving 70% of such requirements to be satisfied by college training. It is suggested, on the other hand, that the "do-ers" could be satisfactorily equipped with 5% provided with a college education and the balance coming 50% from the technical high school and 45% from grammar school. This appraisal is offered to illustrate the conclusion reached by many who have had contact with petroleum personnel to the effect that there can be no inflexible educational standards in the petroleum industry. The industry itself—recognizing the limitations placed on the personnel by their education and the variable educational requirements of the several industry activities — endeavors to maintain a personnel balance with sufficient flexibility of academic training to permit keeping attuned to the needs imposed by its turbulent and ever-changing nature.

There is a definite obligation upon our educational institutions to appraise more carefully the industry's needs and a wide obligation rests upon both educational institutions and the petroleum industry to prevent the annual exodus of large



Nearing the 7515-ft. level where the 5½-in. was cemented are these Union Oil Co. men at the Austin No. 5, Dominguez. Left to right, they are: Lu McClune, B. J. Nixon, D. V. Porterfield, "Wild Bill" Meginness, and C. W. Thompson.

This Rocky Mountain Drilling Co. crew took time out for the cameraman recently at a Wasco well. They are, left to right: Aley, Wilson, Edmondson, Rushing (Driller), Ford, Davidson, and Toolpusher L. A. Whipple, Jr.

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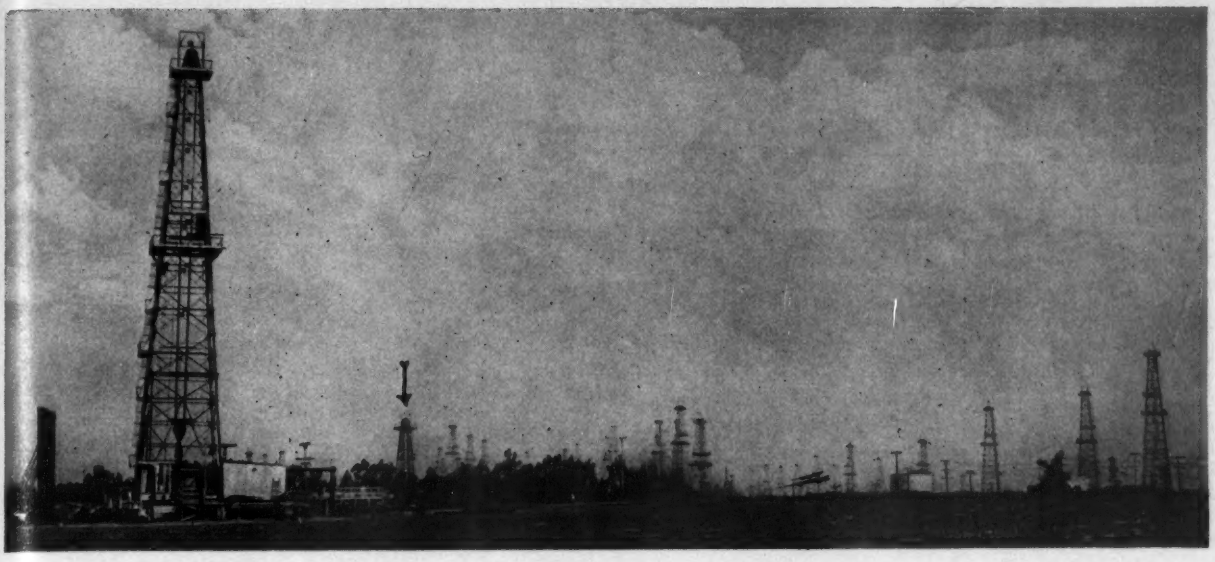


Standard Oil Co.'s L. A. I. No. 31, at extreme left, appears to be hung up at Inglewood until R. R. Bush Sentuous No. 1, arrow, makes a better showing.

groups of graduates from these institutions whose training in the aggregate is disproportionate to the needs of the industry and not consonant with their own opportunities and desires. This point is thrown into sharp relief when it is considered that the educational requirements of the bulk of the industry's personnel are supplied by technical high schools, trade and grammar schools and that the industry cannot be expected to absorb highly skilled and trained personnel without limit when there are neither jobs available at present nor in prospect for individuals so trained. In other words, the industry can be expected to employ highly trained personnel only in so far as required to conduct its business and should this result in the placement of only a small percentage of the available candidates, the oversupply only contributes further to our mounting social problems. Moreover, men with the higher order or scientific and engineering training generally available in the universities do not make satisfied employees at jobs for which the educational requirements are equivalent only to trade or technical high school training. Hence, there should be close coordination between university and industry to insure that the latter's ability to absorb highly trained personnel is known. Unfortunately, we are confronted today with a formidable unemployment problem, and contributory negligence on the part of our universities or the petroleum industry is not to be condoned.

These considerations have come to be largely overlooked since the growing consciousness of the petroleum industry in recent years to the value of engineering training has created a demand for college trained engineers which frequently could not be satisfied. Now, how-

At left, in background, Ed McWhirter is apparently saying something pleasant to Roy Hitchcock, of H. & B. Sales.

Looking Toward Santa Paula from Schieferle No. 1.

ever, it would appear that the market for engineering service is rapidly changing from that of a seller's market to a buyer's market and one in which the petroleum industry—the buyer—is becoming increasingly exacting in prescribing educational qualifications and personal specifications for engineering material. Thus, the industry is becoming increasingly reluctant to accept a diploma from an engineering school as evidence that the candidate is fitted for whatever task may come. In the interests of maintaining an elastic personnel balance the industry finds it imperative to 1) appraise carefully and correctly identify the task to be undertaken as one of "research", "planning" or "doing", and 2) to insure that the candidate's training has been thorough and that it will match the line of endeavor he is to undertake. Although exacting, these requirements on the part of industry are nevertheless entirely reasonable and may be expected to react to the benefit of the engineer as well as his employer.

It is difficult to program or forecast the professional career of petroleum personnel over long periods of time and it is to be expected that an individual engineer in the course of his career will be faced with a broad variety of problems and obligations. Hence, we find it difficult to overemphasize a cardinal requirement of education for engineers in the petroleum industry, namely, that they be well grounded in scientific fundamentals. Today's quickened tempo in the industry does not permit training in engineering fundamentals by the employer and if these men are to acquire a sound engineering foundation it must be gained while attending an engineering college. In our opinion, today sees too little attention paid to basic courses in the undergraduate curriculum. Petroleum engineering is probably the broadest of all engineering pursuits, involving a knowledge and utilization of the principles of a large number of other engineering branches, and inasmuch as the petroleum engineer should have unusual versatility in the engineering branches and with time not permitting actual course work in all these branches, it becomes essential that he develop a high degree of basic science or fundamental training. With these tools he can adapt himself readily to any engineering problem which may arise in his profession even though he may not have taken a technologic course dealing with that particular problem. The conclusion seems inescapable that great and inexorable responsibility rests upon the university to implant fundamental knowledge.

With these needs in mind, we have designed and append hereto a suggested course of study which we believe to be sufficiently inclusive for students contemplating entering either of the two main engineering phases in oil field development, i.e., (1) Mechanical — planning, construction and maintenance of oil field equipment and facilities, and (2) Exploitation — subsurface and reservoir behavior analysis.

Inasmuch as there is barely room in the time allotted to undergraduate training for the essential basic nontechnologic courses, i.e., physics, chemistry, mathematics, fluid flow, thermodynamics, etc., specialization seems definitely out of the question. Contrary to popular belief, there is no great demand for young engineering specialists in the industry today and where needed it has been found advisable to create them from good material within the industry itself in order that their training may be directed into desired avenues of specialization. Too frequently the rapid pace of technolog-

The road down to the valley winds tortuous, dusty miles.

ic advance renders the specialized training of an engineering graduate obsolete and himself an industrial misfit. Further, it is realized that for economic, or other reasons, many engineering students who desire to enter the producing branch of the petroleum industry cannot spend more than four years in a university. Therefore, there is an implied but definite obligation to provide these men with a fundamental education which will best fit them to take their place in the industry and upon which they may build regardless of the particular phase of engineering endeavor embarked upon should they not obtain positions in the oil industry following graduation.

Too often candidates are accepted and later found not to have been provided with an introduction to the principles of economics nor to possess more than the most casual acquaintance with English and logic. The study of economics must be considered an essential basic tool for the engineer since seldom in the petroleum industry can a sound decision be attained based upon physical considerations alone. In the process of economic justification, these considerations almost without exception must be tempered by financial considerations. Although it is not expected that the engineer should be a student of rhetoric nor adept at syllogistic argument, some training in fundamentals of English and logic would seem essential if he is to express effectively to others in written and oral form his engineering conclusions and recommendations. The engineer possessed with a fine understanding of engineering principles and the ability to see an assignment through to its logical conclusion is indeed in tragic circumstances if unable to make effective written or oral presentation of his findings and recommendations.

In the past, education has provided students with a clear understanding of the basic philosophy underlying the sciences and the principles involved. Furthermore, education as programmed under the old system provided a nice appreciation of cause and effect relationships —an attribute which we can ill afford to sell short. Today the universities appear to be blindly "knuckling under" to the demand for exact knowledge to be applied as a tool which is prone to overshadow these worthy attributes.

Thus, without a happy relationship between philosophy and fact underlying the educational program, the answer per se becomes the objective rather than knowledge of its value or relation to the whole. Under the new, order, 2x2=4 rather than an indication of increasing strength or enhanced values. Continued apathy on the part of our universities to the advent of an educational system involving the loss of these intangible but intensely real values should not be countenanced.

In addition to training in the principles of engineering, the importance of personal characteristics must be given deserved emphasis. It has been our experience that carefully selected technical graduates are rarely ever dismissed because of lack of technical ability but rather frequently as a result of some personal characteristic deficiency. We consider the personal attributes of technical graduates to be very important and in our experience the following are the most desirable:

Leadership		Industriousness
Initiative	+	aggressiveness
Loyalty		Cooperation
		Judgment

Although we do not believe that the need for high scholarship has been overstressed, and particularly is this true in view of the small

At Union Oil Co.'s projected deep test on Signal Hill, L. B. C. No. 19, are drilling crew members Pappy Kennedy, C. W. Kelley, P. Anglin, A. L. Casey, and Ben Hemmerling.

percentage of college trained men ultimately obtaining the work for which they have prepared, we are of the opinion that graduates are leaving the universities with a dwarfed idea of the importance of personal characteristics to their industrial welfare. Perhaps this arises from the all too frequent perfunctory use of such terms as leadership, initiative, and aggressiveness to the place where they have become trite and meaningless. At any rate failure to recognize the value of such attributes is indeed unfortunate. We have previously mentioned the quickened pace of the industry and its ever-changing aspects, a state which accentuates the need for independent thinking, aggressiveness, ability to get along with fellow employees, good judgment, etc., if we are to meet these new problems successfully. There have been many instances where the progress of employees with excellent technical training has been affected adversely by reason of personal characteristic failings and we firmly believe that there is an obligation upon the schools to see that engineering students have a better appreciation of the industry's requirements in this respect.

Deficiency in any of these personal qualifications may be inherent and to some degree immutable in the individual. However, it has been observed over and again how the engineering student guided by the experiences and contacts of college life has developed with marked progress along personal lines and it is believed that the greatest single force for the salvation of the student in this respect lies in the careful attention and understanding guidance of an experienced and interested member of a college faculty who by plan or circumstance is in general close touch with the student.

In writing this paper it has not been our objective nor has there been any attempt to set forth rigid personnel requirements in detail for the production phase of the petroleum industry but rather to provide a broad commentary upon outstanding needs as we see them today—needs which we have reason to believe are commonly recognized by progressive executives.

It seems manifest from the economic and social chaos saddled upon the world today that technical advance has far outstripped philosophical and sociological development and that great responsibility rests upon society to make education more effective than it has been in the past, largely in the hope that our young people will be able better to solve the many problems baffling present-day society. In this we believe that most of us fully recognize the responsibility and that our presence before the meeting of the Society for the Promotion of Engineering Education is indicative of the sincerity of industry and education to work together to this end.

Drilling Costs Should Be Capitalized

Bureau of Internal Revenue has issued General Counsel Memorandum 22224, relating to charges to capital and to expense in the case of oil and gas wells. The memorandum states that where a contract is entered into between the owner of an oil lease or fee property and another for the assignment of an undivided interest in the lease or fee property in consideration of an agreement by the assignee to drill one or more wells on the land, drilling expenditures made by the assignee are not deductible as expenses but should be capitalized, regardless of whether the assignment was made prior to or after the drilling of the wells. The ruling modifies General Counsel Memorandum 10686 (C.B. XI-2,257 (1932).

Gasoline Sales Rise in August

Taxable distribution of motor vehicle fuel in California for the month of August amounted to 173,546,089 gallons, according to figures just released by the California State Board of Equalization. This was an increase of 9,409,998 gallons over the same month last year, and an increase of 13,765,916 gallons from July this year. For the first eight months of 1940, total gasoline distribution was 1,246,348,177 gallons, an increase of 53,149,427 gallons over the corresponding period last year. Total tax assessments for the month amounted to $5,206,382.67, bringing the total for the year to-date to $37,410,132.26.

Supercharging, borrowed from the aircraft engine, is held likely for the future.

Abstracts of A.I.M.M.E. Presentations

In Los Angeles October 17th and 18th

DEVELOPMENT AND APPLICATION OF SUBSURFACE PRESSURE DATA IN KETTLEMAN HILLS

by E. W. McAllister, Production Engineer, Kettleman North Dome Association, Avenal, California

●

The author discusses the development and use of subsurface pressure data, giving examples of their application to production problems in Kettleman Hills. The latter part of the paper is taken up with a discussion of past production practices in Kettleman Hills and the harmful effects of nonuniform rates of withdrawal of oil and gas upon the reservoir pressures as determined from subsurface pressure data.

THE EFFECT OF CURTAILMENT ON LOCAL TAXES

by Walker S. Clute and Milton W. Lewis

●

Drastic curtailment of oil and gas wells has brought with it a new relationship of local taxes whereby the tax levies are materially increased with respect to the lowered production and earnings of the properties. The reasons for this are twofold: (1) the remaining high capacity to produce after each year's curtailed production, leaves a great amount of oil reserves to be assessed over and over again, and (2) the normal producing period is extended from 15 to more than 25 years, adding additional period for assessments; and at the same time costs of producing as well as taxes are increased.

Computations have been made covering the probable assessments upon sizeable wells through their future lives, as compared with open-flow wells of the same initial capacities. It is found that representative wells may pay in total more than twice the taxes that would have been levied had the wells been produced at open-flow rates. The factors used to provide for curtailment in various assessing methods have been analyzed and are here demonstrated by a new presentation of a series of present worth decline curves, with a view to ascertaining whether present methods give full recognition to curtailed values. Direct engineering appraisals were prepared for future years, and comparison shows that present assessment methods usually results in reasonable annual values under curtailed conditions.

However, neither of the latter methods approach the total lower assessments of wells formerly producing at open-flow rates when valued on that basis. Hence it is found that the total valuations on sizeable curtailed wells increases the assessments in a manner which appears not only to place a penalty on curtailment, but also to impose an extra tax burden on the oil industry.

Any relief from this lies in the best recognition of these circumstances that can be granted by the taxing authorities so that no error be made toward the higher side of the valuations found for tax purposes.

EXPERIMENTS ON FLOW OF HETEROGENEOUS FLUIDS THROUGH CONSOLIDATED SAND

by John A. Putnam, University of California, Berkeley, California

●

An experimental investigation of the flow of natural gas-crude oil mixtures through consolidated sandstone cores is described. A description of the apparatus and methods employed in the experiments is also included. An empirical relation which expresses the response of total fluid flux to pressure gradient is developed from the experimental data and compared with the results of other investigators. The empirical relation is based on two parameters, which are the threshold gradient and the slope of the total flux-pressure gradient curves. These parameters are related to the properties of the fluid system and porous medium. A flow method for determining the viscosity of saturated liquids at elevated pressures is indicated.

NOTES ON ESTIMATING AND VALUING OIL RESERVES

by Paul Paine and H. K. Armstrong

●

In the valuation of developed oil properties, the most important considerations are the estimates of oil reserves, of costs, and of the resulting future profits. Some of the factors making up these considerations are more commonly emphasized than others; some are often minimized or entirely neglected.

Using the records of an old producing property, a study is made of it by a number of valuations, at successive periods; in these the only information considered is that which would have been available at each of these times. Consistency is further sought by utilizing only such technical methods as would have been in practice at these times. The valuations are compared with what has subsequently happened at the property, and the effect of the various factors are reviewed.

The engineer's responsibilities in presenting these uncertainties in his reports are pointed out. The misuse of discount factors, either by reason of misinterpretation or through conveying an unwarranted appearance of precision, is discussed.

NEW METHOD OF PLOTTING SLANT HOLES

by Tracy L. Atherton. Drawings by Francis J. Hortig and C. L. Moore

●

The method is quite workable in operation and the sections provide a relatively simple map for laymen. While the application described here was tailored for the Huntington Beach Tideland Pool, the primary principle, of mapping perpendicular to the hole will simplify many slant hole mapping problems.

THE CHARACTERISTICS AND APPLICATION OF AN OIL BASE MUD

by Horace W. Hindry

●

The purpose of this paper is to present data on the fundamental design of the mud, the ingredients used and their specifications; the effect of ingredient concentration on physical properties; the selection of the proper mud; the facilities needed for handling the mud, and a general discussion on drilling with oil base mud. In view of the early stage of development of oil base mud, the great number of variables, and the infinite possible combinations of these variables which in turn require extensive laboratory study, there are certain irregularities and omissions in the data presented. However, it is believed that sufficient data are at hand to permit a fairly complete analysis of the characteristics of oil base muds.

CHANGES IN NATURAL GASOLINE MANUFACTURING

by William A. Roper, Western States Gasoline Corporation, Los Angeles, Calif.

●

The author outlines "some of the more important economical, technical, and mechanical changes which have taken place and their effect on the industry as a whole."

DRILL PIPE CORROSION

by V. V. Mason, Standard Oil Company of California

●

An attempt is made by the author in the present study to reduce the problem to the simplest possible approach. Instead of becoming involved in the chemistry of muds and steel alloys, obser-

vation of actual drilling operations and drilling equipment for indicators to point the way toward corrective measures is made.

REVIEW OF ADVANCEMENTS IN CALIFORNIA DRILLING PRACTICE FOR 1940
by A. H. Bell, Continental Oil Co., Los Angeles, Calif.

●

This paper will attempt to outline the developments of major interest that have occurred during the past year without regard to the actual dates of their inception.

OPERATION OF THE GAS LAW IN WEST MONTEBELLO FIELD
by E. Huguenin, Deputy State Oil and Gas Supervisor; Harry P. Stolz, Consultant Engineer to the Attorney General

●

In conclusion, results obtained by the injunction suit may be summarized as follows:

First and most important: Conservation of gas energy has led to a longer flowing life of the individual wells and therefore the field as a whole, increasing the ultimate recovery of oil.

Second: A saving to the operators in production costs and increasing their ultimate revenue thereby. If the total field blow had been allowed to continue at 100,000 Mcf. per day, valued at 4c per Mcf., the value of the gas thus blown would have approximated $600 per well per month, or considerably more than the monthly operating cost of the average well.

Third: The saving to the ultimate consumer—the People of the State of California—some of their irreplaceable natural resources, great quantities of natural gas, the value of which would be in hundreds of thousands of dollars.

Fourth: The education of the majority of operators at West Montebello oil field as to the benefits derived by the conservation of the gas energy, whose cooperation was first forced, but who now value these benefits.

Fifth: This action upon the part of the State and the cooperation obtained between the Court, State enforcement agencies, and the operators, should point the way to a solution in other fields that may become potential gas wasters. Such a solution should be reached by the voluntary efforts of the operators concerned, without the need of Court action.

C.N.G.A. Fall Meeting Plans

Completed for L. A. November 1

With programming arrangements now completed, plans are being formulated for handling an all-time record attendance by natural gasoline and refinery men at the 15th Annual Fall All-Day Technical Meeting of the California Natural Gasoline Association November 1, according to the joint announcement of L. V. Cassaday, association president, J. B. Taylor, program and Fall Meeting chairman and H. E. Leedy, chairman of the entertainment committee.

To comfortably accommodate those attending, the Ambassador Hotel, Los Angeles, California, has again been selected as the site for the affair. Three big sessions—morning, afternoon and evening—will be held with the Association's Annual Banquet climaxing the event in the evening. As is the custom, attendance is open to all interested parties with a cordial invitation being extended by President Cassaday.

The morning session will be preceded by a registration period in the Ambassador Hotel Auditorium lobby beginning at 8 o'clock and lasting until 9 when the gavel opening the meeting will fall with President Cassaday making the opening address "C.N.G.A. and Its Accomplishments During Its First 15 Years." The second event on the morning program will be a report by M. W. Kibre, General Petroleum Corp., chairman of the association's technical committee in which the work and activities of that body during the past year will be reviewed. In this portion of the program, reports of three sub-committee chairmen will also be heard on C.N.G.A. bulletins now completed by their respective committees. These reports will be by D. A. Smith, Tide Water Associated Oil Co., on the new bulletin "Physical Constants of the Components of Natural Gas and Gasoline;" Francis Laird, The Texas Co., on the new bulletin, "Low Temperature Fractional Analysis of Natural Gas and Gasoline" and C. B. Heartwell, Standard Oil Co. of California, on the bulletin "The Chartman's Manual."

A feature of the morning session will be a paper by the Research Department, United Geophysical Co., titled "Application of Mass Spectrometry to Analyses of Hydrocarbon Gas Mixtures." This paper records the progress made in the application of mass spectrometry to gas analyses. About two years ago the authors considered a number of problems which were arising in the qualitative and quantitative measurements of small quantities of hydrocarbons. Attention was turned to the possibility of employing physical, instead of chemical, methods of accomplishing the desired results. Investigation disclosed that the mass spectrometer presented the possibility of solving many problems not easily accomplished by other methods. This paper will trace the progress of the work, the necessary apparatus and the technique involved.

The afternoon session will open promptly at 2 o'clock with Henry N. Wade, Parkhill-Wade, on the platform. Mr. Wade's subject will be "Distillate Recovery Systems". It has not been very long since absorption plant operating pressures in California were around 35 lbs. per square inch. Today those pressures are in the 400-450 pound range and the trend now is to even higher pressures. In the Mid-Continent, plants are operating at pressures up to 1500 pounds and even higher pressures. Mr. Wade's paper will give the essential data on high pressure absorption and he will comment on the various types of distillate plants giving a comparison of costs, advantages and disadvantages.

The second paper of the afternoon session will be "Processes for the Conversion of Light Hydrocarbons to High Anti-Knock Aviation Fuels" which will be ably presented by S. H. McAllister, Shell Development Co. Mr. McAllister will review the present commercial methods for the production of high octane fuels including various polymerization processes and alkylation both thermal and with sulphuric acid as well as the latest processes such as hydrogenation and dehydrogenation.

Closing the afternoon meeting, C. E. McCartney, Petrolane, Ltd., will present "Commercial Butane, a Waste Material, Becomes a Valuable Product." He will present a brief history of the expansion of the liquefied petroleum gas industry over the last 15 years pointing out that commercial butane has a much greater economic value than the present market indicates and that it should be considered a product and not a waste material and, as such, it should carry its proportional share of plant overhead and plant operation. An interesting point is that larger marketing differentials should be allowed to warrant educational service and pioneering expense. This paper will also deal with the use of commercial butanes for alkylation and chemical processes, the existing market for the product and the fact that it is a premium fuel in many types of equipment and operations.

Following the technical presentations of the day session, entertainment chairman Leedy states that relaxation will be the motif for the evening. Accordingly, the association's Annual Banquet will be held in the Ambassador Hotel Fiesta Room at 7 o'clock with viands esteemed

by chef and gourmet studding the menu. As is ironclad custom, no after dinner speeches will be made and with the last serving of dessert at the banquet, the program will swing immediately into fun, frolic and festivity with all eyes and ears focused on a big 12 act show replete with headline vaudeville acts.

Tickets for the banquet and show are priced at $3.50 each and reservations should be made immediately as table positions are being allocated in the order in which reservations are received. George L. Tyler, Secretary, 510 West Sixth Street, Los Angeles, Calif. (VAndike 5521) is in charge of reservations. In this connection President Cassaday points out that attendance at the morning and afternoon sessions are free and no registration fee is charged.

Fluor Observes Fiftieth Year

This year marks the Fiftieth Anniversary of The Fluor Corporation, Ltd. From its inception to the present time, the genius and guiding influence of J. S. Fluor, Sr., has been a most important factor in the company's growth and development.

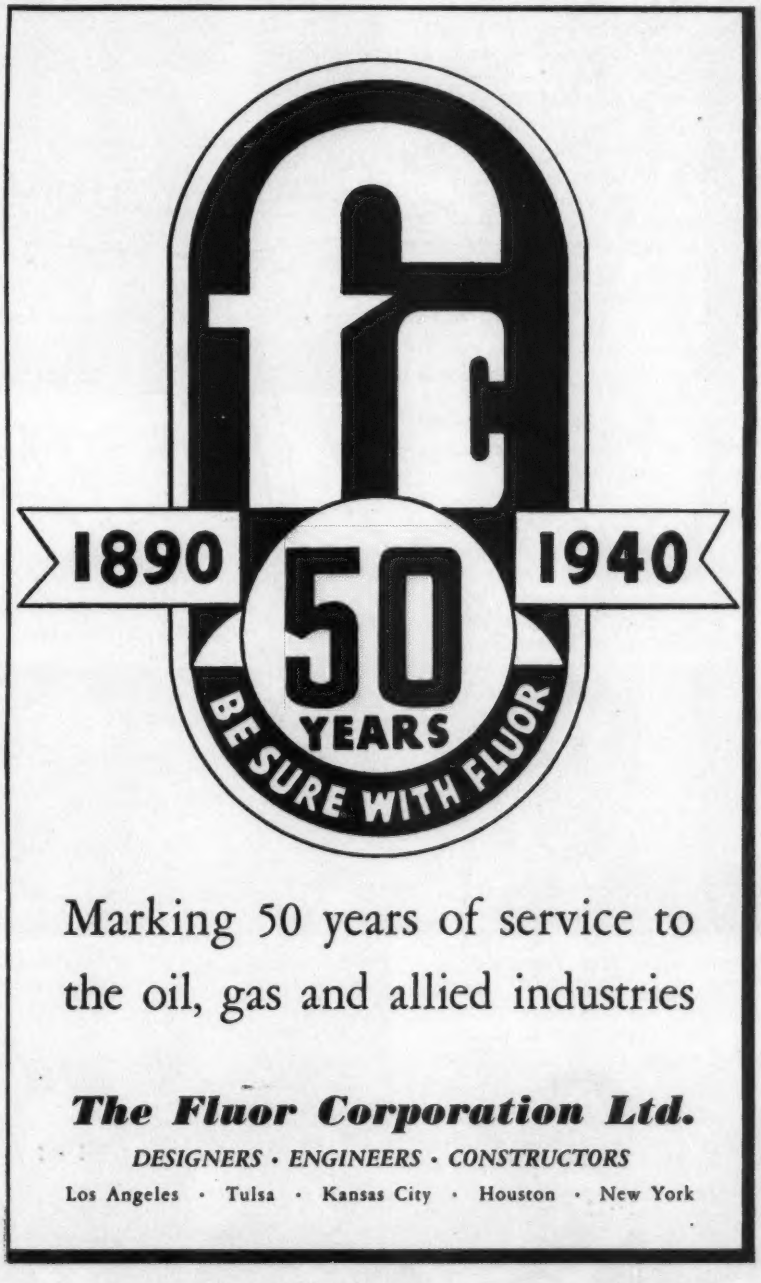
The real development of The Fluor Corporation began in 1912 with the opening of the California period. With a native genius for accommodating his efforts to the needs of his environment, J. S. Fluor turned his attention from logs, lumber and paper mills to the rapidly growing petroleum and natural gas industry. One of the first projects was the building of an office and meter shop for the Southern Counties Gas Company.

After twelve years of foundation development, The Fluor Corporation was incorporated in 1924. Two sons had grown up and were interested in the business. The new corporation was headed by J. S. Fluor, Sr., president; P. E. Fluor, executive vice-president and general manager; J. S. Fluor, Jr., vice-president and assistant general manager; F. E. Fischer, secretary and treasurer. The first man hired in California was E. L. Witford, a carpenter who is still with the corporation.

In November, 1938, The Fluor Corporation acquired the patents, manufacturing facilities, experience and personnel of the Cooling Tower Company, Inc., thereby rounding out the range of services to include forced draft cooling towers and all other types of water cooling equipment. In recent years, major efforts of the corporation have been devoted to the design and construction of complete plants for propane dewaxing, cracking, reforming, natural gas absorption, compressing, natural gas pipe line boosters and allied equipment. The aggregate value of these plants exceeds $35,000,000.

Three of the most important developments in the history of natural gasoline production have been contributed by The Fluor Corporation in the last year or two. These are the recycle of stabilizer bottoms for increasing gasoline production, the presaturation process, and the use of glycolamine for the simultaneous desulphurization and dehydration of natural gas in one operation. These processes are all patented and are licensed to operators for the modernization of existing plants or as parts of new refineries.

The site of the new Fluor plant is at 2500 S. Atlantic Blvd., Los Angeles. Ample room for expansion is provided through the purchase of approximately 12½ acres of land. At the present time buildings actually constructed, or in the course of construction, involve over 60,000 square feet of floor space. The new general offices occupy 10,000 square feet and embody the latest and most modern fittings. In keeping with Fluor's extensive use of California redwood in its line of cooling towers, both atmospheric and mechanical draft, the executive offices are paneled in redwood finish.



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J. S. Fluor, Sr., President

P. E. Fluor, Executive Vice-President and General Manager

J. S. Fluor, Jr., Vice-President and Assistant General Manager

CALIFORNIA CONSTRUCTION FIRM CELEBRATES 50TH ANNIVERSARY

Officials and executives of The Fluor Corporation Ltd. 1940 marks this organization's half century of service to the oil, gas and allied industries.

50th

F. E. Fischer
Secretary and Treasurer

M. L. Lewis
Vice-president

D. W. Darnell
Chief Engineer

W. Earl Dunn
Vice-president and Manager of the Kansas City Division

A. J. L. Hutchinson
Chief Process Engineer

H. R. Lambert
Manager of Cooling Division

George W. Meyer
charge of Development Department

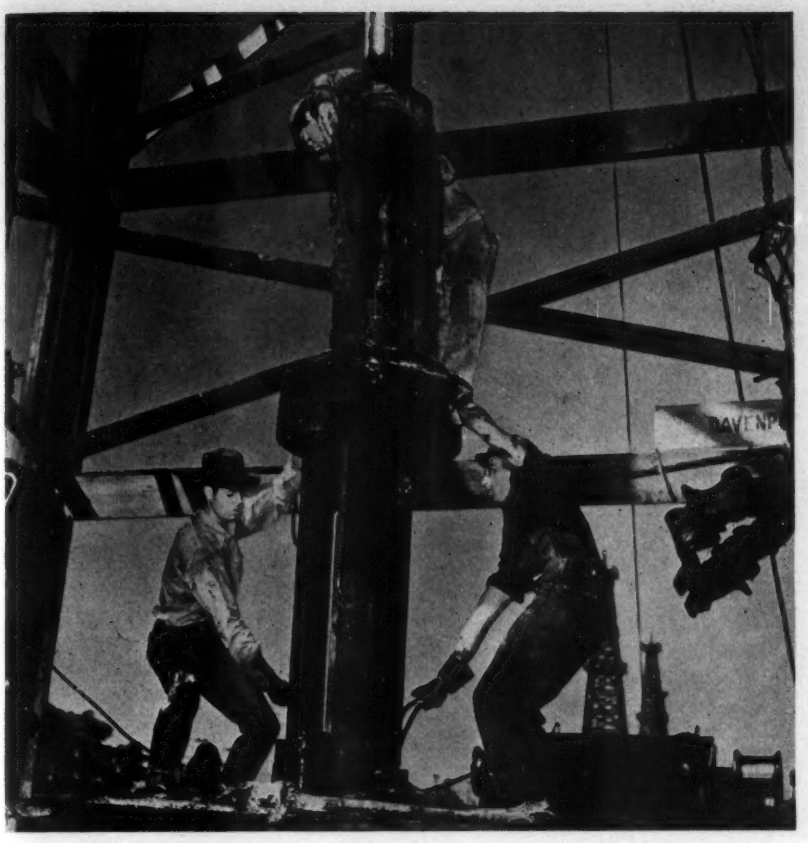
H. S. Farnsworth
Assistant Chief Engineer

T. H. Seavey
General Purchasing Agent

R. P. Hollister
Purchasing Agent Kansas City Division

A. A. Stillger
Superintendent of Cooling Tower Mill

E. G. Durnal
Chief Draftsman



This hydraulic jack crew, finding the casing parted, are running back in with a die collar on bottom to fish out lower casing section.

Proud of their prime mover are, left, J. B. Ketchum of the Chas. W. Carter Co., Continental Motor distributor; and Harry Owens, operator of a Len Owens hydraulic unit. The motor is a Model 22R Continental, also furnishing power for the unit through a transmission take off.

Hydraulic Jack Valued Specialty

Further proof that we live in an age of specialization are the many types of tools and engines designed for specific jobs. Many of the tools are intended not only to do an efficient job but are designed to do work for operators whose scope of operations do not warrant the expense of maintaining special equipment for jobs which are not every day occurrences.

Typical of the many services now afforded an operator are the organizations which provide hydraulic equipment as pictured herewith. These outfits are operated specifically for certain types of unusual jobs. Handling of these occasional jobs by an outside specialist provides a cash saving to the well owner. In addition to savings in capital investment and lessened insurance rates, employment of such an organization affords the well owner better designed and newer equipment, a highly trained crew and freedom from maintenance costs.

The hydraulic rigs shown here are of special value in cases where emergency pulling of drill pipe or casing is required because of rig break-down or where disaster has precluded use of the regular draw works. The tremendous, constantly applied power afforded in these units has often salvaged a hole in which drill pipe or casing appeared hopelessly stuck. Among the varied uses of the rigs, not the least important is the salvage feature afforded during official abandonment of wells. Water strings and cemented oil strings may be shot off and pulled only by the application of thousands of pounds of constant pressure. Using the hydraulic jacks, the casing is pulled with the pressure exerted against the derrick floor or foundation which in most instances, even in a very aged well, is yet in sound condition.

Specifications on one of these hydraulic jacks recently designed by A. B. Harris and built in the J. B. Nelson shop in Long Beach follow: This unit, mounted on skids for truck transport, exerts a continuous hydraulic pressure of 10,000 pounds per sq. in. within each jack cylinder. Jack sizes are determined by weight of the load to be lifted.

The prime mover employed is a Model 22R Continental engine, a 501 cu. in. piston displacement job developing 155 horsepower on turbine, with a compression ratio of 4.43:1 and a recommended governed speed of 2200 r.p.m., an installation typical of many in use today.

The power is delivered through a

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"OUR TRUCKS GO ANYWHERE"

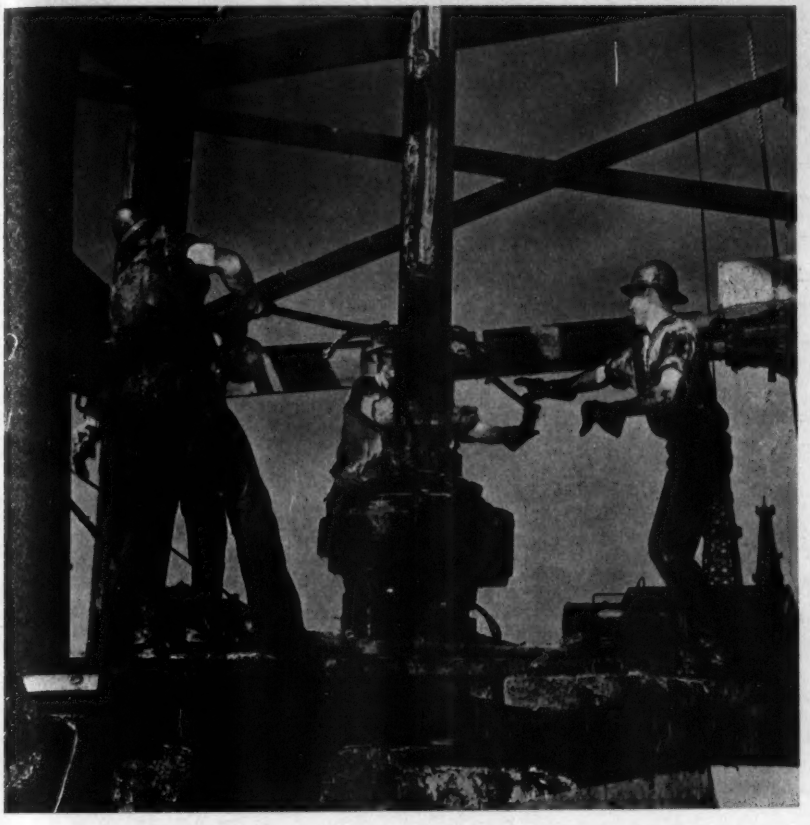
Satisfied with their Harris designed, Continental powered unit are: left, Harry Owens; extreme right, J. B. Ketchum. Crew members are Ronny Parish, Dean Chard, Kenny Chard and Arthur Nightingale. ←

transmission ratio of 3.25:1, a gear ratio from transmission to drive shaft of 16:18, from drive shaft to line shaft of 15:18 and from line shaft to pump of 18:15. The drum is powered from the drive shaft at a ratio of 15:48.

At 605 r.p.m. the pump displaces 16,-100 cu. in. of fluid per minute at a working pressure of 10,000 pounds per sq. in., which fully extends a 6½x60 in. jack in 15 seconds or a 4x60 in. jack in only 6 seconds.

The rapidity with which pipe can be pulled with such a modern outfit is a considerable factor in increasing uses for the equipment and in lessening costs per job.

Exerting an approximate maximum effective pull of 325 tons, the power of this unit far exceeds the probable weight to be handled. Maximum pull on such a unit is exerted only on the initial lift after the first shot into a casing string and before the cement band or sand bridges



Hand tonging a casing joint on a Huntington Beach pulling job. Men must be nimble and strong to handle eight-inch casing.

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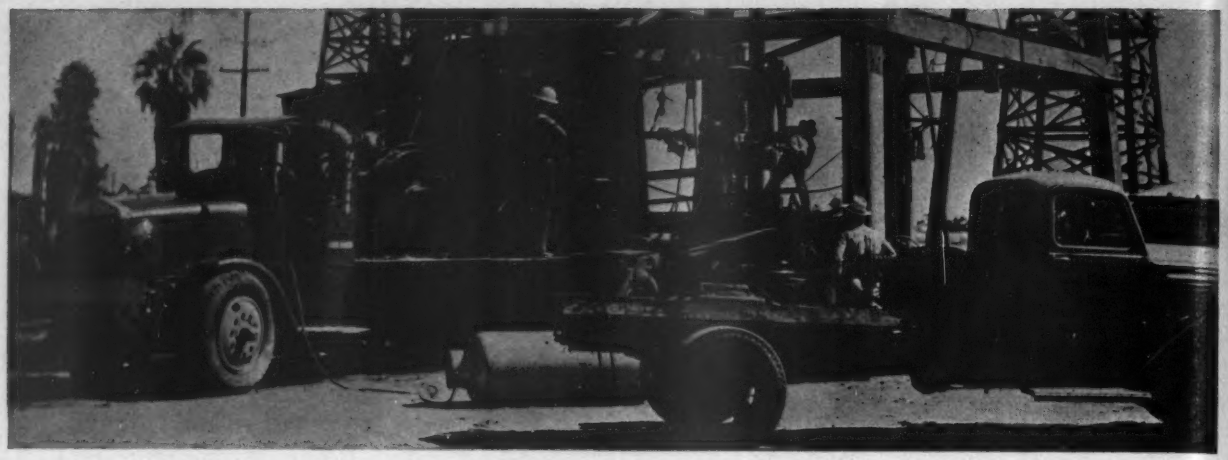
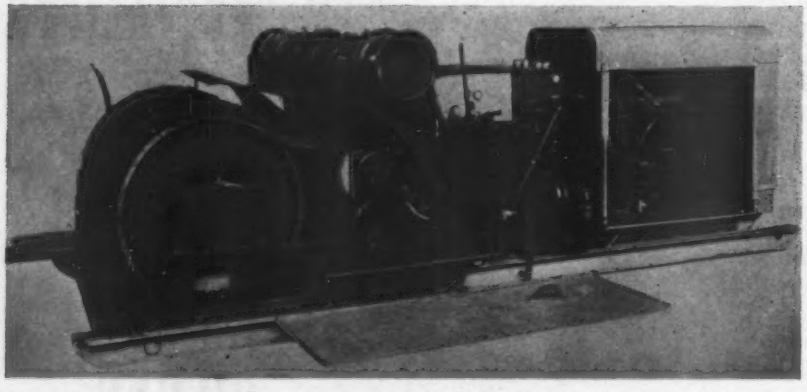


Hydraulic jack rig in action, butane powered, the large reserve tank of fuel can be seen in middle foreground. Shooting wagon is on right.

Part of Arthur P. Anderson's specialty equipment lined up on Supply Row in Taft, California. At the extreme left is a heavy duty unit. Mounted on a GMC truck the hoist is a fully hydraulic Emsco unit powered with a 150 horsepower Waukesha butane engine.



Hydraulic unit designed by A. B. Harris for Recknagel and Owens. Pictured without its fully streamlined guards, the unit is described in accompanying article.

are completely sheared. Under normal conditions, these units operate at only a fraction of their maximum power.

The flexibility of hydraulic jack equipment is illustrated by the fact that using pulled casing as a string, a competent job of fishing for lower sections may be done. Such flexibility greatly increases total salvage value on an abandonment job.

Eastman Establishes Rocky Mountain Office

The Eastman Oil Well Survey Corp. announce the establishment of a new division office for the Rocky Mountain States at 355 C-Y Avenue, Casper, Wyoming. C. S. Meece has been appointed division manager.

The personnel chosen to extend oil well surveying and controlled directional drilling services to this division are from the California and Mid-Continent areas where they have had extensive experience.

Removable and Casing Whipstocks, Knuckle Joints, Directional Bits and Reamers, Single Shot Instruments, Drift Indicators, etc., are now available at Casper.

According to present trends rear-engined models with higher compression ratios supplying more speed and agility will be made in one piece with superstructure in part of the chassis.

Field Development

Los Angeles Basin

Montebello Wells Flow Good Rates

Good initial flow rates have recently been established by several deepened wells in the Montebello field. Among the top notchers are Kern Oil Co.'s Monterey No. 27, deepened from 6279 ft. to 7785 ft. and recompleted for 870 bbls. of oil and 5,000,000 cu. ft. of gas; Standard Oil Co.'s Harvey No. 4, finished at 7735 ft. for 491 bbls. and 2,835,000 cu. ft.; and McVicar-Rood Montebello, Ltd.'s Manz No. 4 which at 7758 ft. came in for over 500 bbls.

Wood-Callahan's Todd No. 1, deepened 30 ft. to 7760 ft., was recompleted flowing circulated oil at a 370 bbl. rate but soon died and had to be put on gas lift.

Havenstrite Completes Big Dominguez Producer

Though the lowest structurally of any producer on the Larronde lease at Dominguez, R. E. Havenstrite, Operator's No. 4 is a big well, the initial being estimated in excess of 1200 bbls. a day. Through a 16/64 in. bean, production was 800 bbls. of 32 gravity oil cutting less than 1.0%. Casing was cemented on bottom at 7636 ft. and gun perforated from 7140 to 7185 ft. and 7575 to 7600 ft. The intervals were picked from the results of a careful laboratory analysis made of the cores which superficially looked doubtful. Further proof of the efficacy of this procedure is the fact that another sand streak which appeared good to the naked eye but wet on the analysis yielded only water on production test. The Havenstrite organization has moved equipment to No. 5 which is being drilled one location south of No. 2.

On the south flank of the central section of the field, Shell Oil Co. brought in Reyes No. 107 flowing 525 bbls. a day from several open intervals between the shoe of the water string at 6840 ft. and bottom at 7450 ft. The oil is free of water and tests 30 gravity.

Union Oil Co.'s Callender No. 81, located north of Victoria Ave. and east of Avalon Blvd., was a disappointment when it would not flow naturally and had to be put on the pump. Hole is bottomed at 7618 ft.

Callender No. 79, Union's deep test of the westerly fault block, is approaching 6000 ft. in depth but will not become particularly interesting until it gets below 8000 ft. No footage limit has been set for this well, the company's only comment being that it will explore below the Eighth Callender zone.

Union is preparing to complete Austin No. 5 west of Avalon Blvd. and has location staked for Callender No. 80.

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Athens	Rankin & Williams	1	7, 3-13	6520	Rigging up
Castaic	Colter, R. T., Explor.	1	8, 4-17	1338	Idle
	Havenstrite, R. E., Lincoln	1	16, 4-17	6948	Sidetracking
	Havenstrite, R. E., Lincoln	2	16, 4-17		Grade
	Pedro Pet. Co., Oates	1	24, 5-17	1025	Drilling
	Worland Oil Co., Jenkins-Owens	1	18, 5-16	2790	Idle
Dominguez, West	Wood-Mellon Oil Co., Wood	1	31, 3-13	7498	Redrilling
La Habra	Security Land & Water Co.	1	9, 3-10	5185	Abandoned
	Fullerton Oil Co.	6	25, 2-11		Location
	Union Oil Co., Sansinena	12	31, 3-10	5698	Idle
Malibu	Sovereign Oil Corp., Sovereign-Marblehead	1	7, 2-18	2081	Drilling
Newhall	Canyon Oil Co., Sanborn	1	6, 3-16		Rig
	Creighton Hammon Synd., C. H.	1	17, 3-16	990	Idle
	Irene Oil Co., Kraft	1	31, 4-15		Rig
Palos Verdes	Rolling Hills Pet.	1	27, 4-14	6580	Idle
San Fernando	Casa Grande Oil Co., Lopez-Lundy	1	1, 2-15	3785	Idle
	Parry, Geo. G., Moynier-Parry	1	6, 2-14	4216	Idle
West Whittier	Cal. Pico Oil Co., Beach	1	7, 2-11	7086	Idle
	Orange County				
Costa Mesa	Thompson, Milton N., Banning	1	9, 6-10	5625	Idle
Garden Grove	Bird & Chambers	1	31, 4-10	1250	Idle
	San Bernardino County				
Carbon Canyon	Earp, H. R., Kraemer-Backs	1	34, 2-8		Rigging up
	Kipp, George, Inc., Bannon	1	32, 2-8	869	Drilling

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Merced	Don Pedro Oil Co.	1	9, 6s-9e	1610	Idle
Monterey	Loma Grande Oil Co., Corey	1	23, 24s-10e	1581	Idle
	Priest Valley Pet. Co., Greve	1	22, 20s-12e	2885	Testing
Solano	Standard Oil Co., McCormack	1	31, 4n-3e	3710	Drilling
San Mateo	Ra-Lite Petroleum, Inc., Bell	5	16, 7s-4w	1175	Drilling
Yolo	Standard Oil Co., Tippetts	2-1	9, 12n-3w	1450	Drilling
Yuba	Wright, L. G., Cox	1	18, 14n-5e	1780	Drilling

Cal-Pico Suspends Pico Area Wildcat

Cal-Pico Oil Co. temporarily suspended drilling at 7086 ft. in its important wildcat, Beach No. 1 near Pico. Located on Durfee Road north of Beverly Blvd., the well is seeking a new structural high on the Montebello-Whittier trend and was beginning to look encouraging when drilling stopped.

Miocene was topped at 6300 ft. and from that point down, the electric log correlated fairly well with West Montebello except for a thinning of zones. Dips all the way to 6700 ft. were relatively flat, at all times under five degrees, but below 6700 ft. increased to nearly 30 degrees indicating a structural change. It is planned to resume drilling to look at the lower Montebello zones.

Rosecrans Outpost Flows 400 Bbls. Daily

Pushing the limits of the south Rosecrans extension to the southeast corner of Main St. and Redondo Beach Blvd., Royalty Service Corp. brought in its A-W No. 1 flowing approximately 500 bbls. per day. Formations are open from the shoe of the 7 in. casing at 7494 ft. to bottom at 7868 ft. Offsets are being drilled by Thos. Kelly & Sons on the northeast corner and St. Anthony Oil Corp. on the northwest corner of Redondo and Main.

With Crest Petroleum Co. hung up with a fishing job and Mission Oil Corp. producing gas, the easterly section of the field is quiet, Midfield Oil Co.'s Murdock No. 1 being the only driller. Midfield is deepening after trying a formation test of the Zinns zone from 6063 to 6165 ft.

Stepping to the west of the current hot spot, St. Anthony is preparing to drill Gordon No. 6. Location is 1175 ft. north and 500 ft. west of the corner of Redondo Blvd. and Main St.

Athens Production Is Big Disappointment

Production of all three deep wells in the Athens sector of the Rosecrans field has been very disappointing so far with the highest yield still credited to the discovery well at 225 bbls. a day. Inca Oil Corp.'s project seems to vary between 50 and 150 bbls. a day while the latest completion, Southern California Petroleum Corp.'s Athens No. 12-1A, doesn't appear capable of over 200 bbls. The latter well, which employs 260 ft. of formation, was bottomed at 8214 ft. and plugged to 8060 ft. after intersecting a fault at 8100 ft. not found in the other wells.

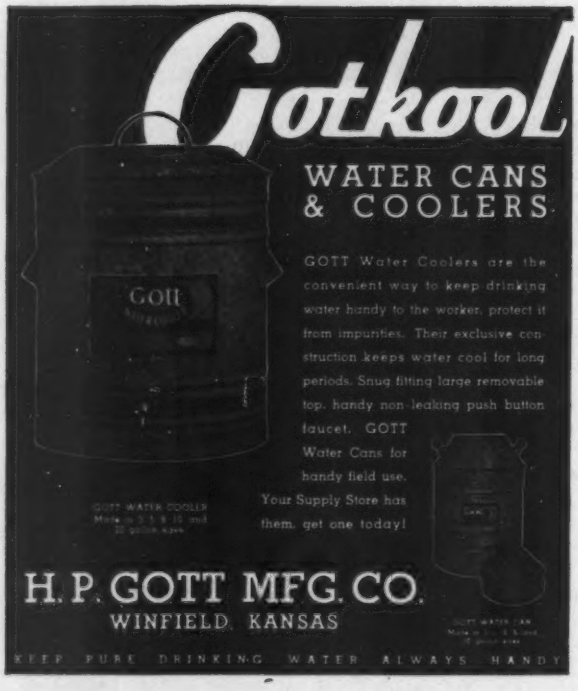
The bright side of the picture is that the first few wells in the south Rosecrans area were very small too and it was not until many wells had been put down that the prolific area was discovered. Hoping to be the one to find the good spot at Athens, Sovereign Oil Corp. is preparing to drill north and west of the intersection of 126th St. and Hoover.

Between Broadway and Main St., Chas. T. McCowin is cleaning out an old Western Oil & Refining Co. well in an attempt to recomplete in the old producing zones. If satisfactory production is not developed, he plans to deepen.

E. Coyote Oil Co. Soon To Complete

With 6⅝ in. casing cemented on bottom at 4248 ft. and gun-perforated below 4227 ft. with 60 shots, East Coyote Oil Co. is preparing to complete its "B" No. 1 at East Coyote in the same fashion as Master Petroleum Co. on the properties adjoining to the south and east. Cores in the oil zone were fair and a small well is expected.

Harrison M. Tucker's Wright No. 1 is also being made ready for a production test after bottoming at 4210 ft. and setting a water string at 4167 ft. Bottom cores are reported to be fractured and to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A few moments each year we like to raise up from our work, take a fresh breath and check our position by the compass. The best compass we know of is the reaction of our old and valued customers.
An interesting observation made at the 1940 Tulsa Oil Show, in May, revealed a total of 153 engines equipped for Natural Gas Carburetion. Of this number 138 were Ensign equipped leaving 15 installations for all other makes. This ratio has consistently been in favor of Ensign for over eight years, during which time more than 50,000 Ensign Natural Gas installations were made. These figures we believe, are significant.
We are indeed grateful to our many Oil Field and Standard Equipment accounts for their confidence and patronage.
ENSIGN CARBURETOR CO., LTD.
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DALLAS, TEXAS
CHICAGO, ILLINOIS

show rather steep dips with wide variations in the quality of the oil sand so little can be said of the well's possibilities until after a trial is made.

Metro Petroleum Co. is standing idle at 4260 ft. pending a decision whether or not to run casing, there being a divergence of opinion on the value of the Lemke zone here.

West of the present active wells, Fred Garleipp built a new derrick over the old abandoned Juanita Yorba No. 4 which he will try to recomplete in the 3200 ft. Anaheim zone.

Continental Drills New Seal Beach Well

Continuing its development of the old Seal Beach field, Continental Oil Co. is starting work on a new project to be known as Bixby No. 45. The location is close to the fault which forms the northeasterly boundary of production.

Continental's last completion was Bixby No. 18 which was redrilled to 4714 ft. and finished in 20 ft. of zone flowing 100 bbls. a day. The company carried No. 44 on the same lease to 4545 ft. but had to plug back and direct the hole to the south in order to avoid the fault.

American Oil Co. Plans Torrance-Wilmington Well

Seeking another link between the Torrance and Wilmington fields, American Oil Co. is planning to drill a well on a 22-acre parcel lying north of Highway No. 101 and east of Figueroa St. The operators believe that commercial production may be obtained in the upper sand known as the Main zone at Torrance and the Ranger zone at Wilmington. Only well drilled to this horizon in the last three years is Vesta Petroleum Co.'s project at the southwest corner of the same boulevards where small production was obtained.

American Oil Co. is a co-partnership with R. K. Summy and W. E. (Bill) Marley Jr. as principals.

Fullerton Oil Co. Spots East Whittier Wildcat

Fullerton Oil Co. has spotted a location for a new wildcat well in the East Whittier-La Habra area about a mile northwest of Union Oil Co.'s Sansinena No. 1 which was suspended two months ago at 5698 ft. The new project will be called Well No. 6 and will be drilled in the southeast corner of sec. 25,2-11 south of the Whittier Fault, which is the main control of the field to the northwest.

In the early part of 1938, Fullerton Oil Co. drilled No. 5 a quarter of a mile north of the new location and abandoned at 2325 ft. The Whittier-Murphy zone encountered from 1450 to 1500 ft. was barren.

Security Abandons La Habra Wildcat

Finding no oil showings to a depth of 5185 ft., Security Land & Water Co. abandoned its La Habra district wildcat well. The project, called Security No. 1, was located in sec. 9,3-10, and appeared to be several hundred feet lower structurally than the nearby West Coyote field.

Standard Coyote Well Cores Better Sand Higher

Finding the deep zone quite permeable, Standard Oil Co.'s Coyote No. 2-14 is expected to be the largest producer in the Bartholomae area of the East Coyote field. When last reported, the well was coring below 6400 ft. in sandy shale streaked with good oil sand. Because of the small number of wells drilled to this horizon very little is yet known of the structure but Bartholomae Oil Corp.'s Stern No. 3-A, now deepening at 5850 ft., and Union Oil Co.'s Toussau No. 2, drilling at 3880 ft., will shed much light. Stern No. 3-A tentatively appears high

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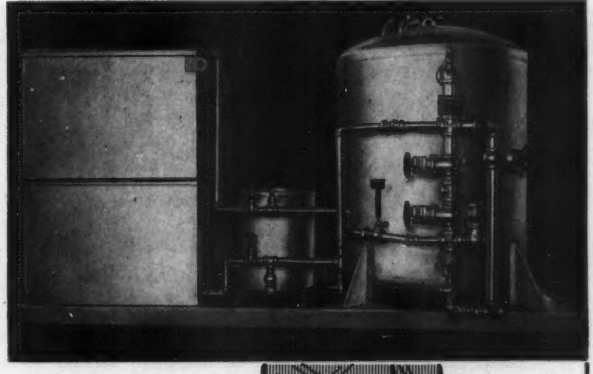

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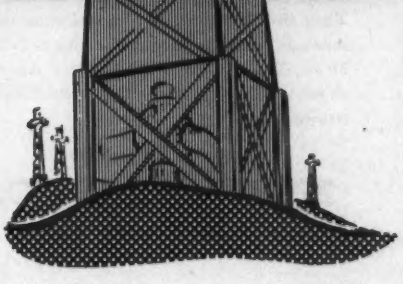

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but an electric log has not yet been run for final correlations.

The new deep sand, which seems destined to become of considerable importance, is referred to locally as the Riley zone; its discovery being credited to D. P. Riley who is Bartholomae Oil Corp.'s petroleum engineer.

Geo. Kipp to Test Carbon Canyon Well

Geo. Kipp, Inc., is preparing to make a production test in Bannon No. 1, sec. 23,2-8, south of Carbon Canyon in San Bernardino county. Hard Miocene shale was cored from 600 ft. to bottom at 869 ft. and 7 in. casing was cemented at the top of the zone.

A mile and a half to the northeast, near E. F. Stella's active wildcat, H. R. Earp has spudded a well with light portable equipment.

2 Yorba Linda Wells Pump 100 Bbls. Each

Two wells were recently finished at Yorba Linda, each pumping in the 100 bbl. a day class. Most satisfactory is Geo. Morgan's Fricke No. 2 which is producing the interval 1980-2070 ft. with no sign of the sand trouble which has interfered in its companion completion, Silver Star Oil Co., Scott No. 1. The latter well is open between 2150 and 2260 ft.

F. E. Fairfield of the Oil Tool Co. is drilling a new well and Division Oil Co., headed by R. D. Prior, is preparing to recondition its old well.

Wood-Mellon Wildcat Plans Formation Test

With the redrilled bottom at 6864 ft. in what is believed to be the equivalent of the Sixth Callender zone of the Dominguez field, Wood-Mellon Oil Co. is planning to run a formation tester in Wood No. 1. The new hole was directed to the southwest and encountered the top of the horizon at 6750 ft. which, allowing for the drift, is nearly 100 ft. higher structurally than the original vertical bore according to the operators. Opinions of observers vary as to the probable outcome of the test as cuts of the sand streaks ranged from light to good. A total of 30 ft. of sand is claimed for the interval.

Signal Oil & Gas Co. Tests Huntington Wells

From early reports it does not appear that Signal Oil & Gas Co.'s second pair of Huntington Beach Bolsa lease completions will be as good as the first two which flowed 900 bbls. and 650 bbls. respectively. No. 15 was finished at 3950 ft. pumping 220 bbls. with a 30% cut and is plugging back while No. 14 had not started to flow after two days swabbing. The latter well bottomed at 3750 ft. and plugged to 3610 ft.

Latest State Tideland completion was The Termo Co.'s Fee No. 6 which is pumping 360 bbls. a day from a depth of 5521 ft. The company is preparing to drill No. 3 on the same surface property.

Clearview Oil Co. is preparing to spud its second well in the small Five Points area.

Deep Hill Well Cements Casing

Union Oil Co.'s Long Beach Community No. 19, avowed 10,500 ft. test, is preparing to drill ahead after cementing 13⅜ in. casing at 3196 ft. and "c.p.ing" at 1425 ft. The well is a southerly offset to Dormax Oil Co.'s deep well.

Beloil Testing Potrero Well

Beloil Corp. is testing its Castleberry No. 1, located northwest of Manchester and Prairie at Potrero, after perforating casing cemented on plugged bottom at 7388 ft.

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Texaco Wildcat Below 9000 Ft.

Still seeking commercial oil sands in the Cantua Creek district of Fresno county, The Texas Co.'s Everding No. 1 drills at 9280 ft. Located in sec. 24,17-15, the current well is bottomed in hard shale. Its immediate predecessor, S.P. No. 1, establishing the presence of a reservoir by flowing some gas, water and condensates from Eocene sands at 9356 ft.

Mt. Poso "Cats" Hung on Hook

After finding barren Vedder sands at 2480 ft. which carried to bottom at 2505 ft., Crestmont Oil Co.'s Smith No. 1 was abandoned. Drilled in sec. 11,26-27, the well was one of three trys at extending the Mount Poso producing area.

Second of the attempts was Universal Consolidated Oil Co.'s Villard No. 1 in sec. 18,26-28. Abandoned at 1928 ft. in gray Vedder sand, the well found traces of oil in only the top foot of the zone at 1912 ft.

Last of the wildcats is Signet Oil Co.'s Signet No. 1, located east of the field in sec. 36,26-28. Now idle at 775 ft., the well will probably also go definitely on the hook as granite was reported at 590 ft.

In the proved section of the field, A. T. Yeager finished his Murdoch No. 3 pumping 180 bbls. gross of heavy oil last reported cutting 16.0%.

Richfield Re-Rigs Tejon Ranch Test

While its Tejon Ranch No. 1, deep test of lands at the base of the Grapevine, stood with 9⅝ in. protective pipe cemented at 6968 ft., Richfield Oil Corp. utilized the time by rebuilding its already powerful butane drilling rig and is again making hole near 7600 ft.

Originally the outfit, which carried a Wheeler Ridge well below 11,000 ft., was powered with two butane engines developing 350 horsepower at 600 rpm. These engines have been speeded to 900 rpm and have been supplemented by a third engine of like power. The radiators have been moved to an external position and an ingenious circulating system installed to thoroughly control engine temperatures.

Plans at the moment are to continue exploration in this hole to at least 9700 ft. and, lacking promising sands, it is probable the hole will be carried much deeper. Such a test in this area will be of singular importance to the company since it controls thousands of acres in the south Valley plains. Furthermore, the lower geologic sections have never been adequately placed in the area.

Farther north in the Grapevine area, near the center of sec. 19,11-19, Kern Line Oil Co. has reported a few gas showings near bottom at 6100 ft. Located on a structure which electrical devices show to be a dome, the well at last report was repairing equipment.

Round Mt. Area Remains Active

Trico Oil & Gas Co. has built rig for Westco No. 1 near its recently achieved production in sec. 8,28-29. After drilling two dry holes northwest of Crestmont area production, Trico came through with two substantial producers between the original test holes. Second of the pumpers, Coffee No. 4, initialed at 275 bbls. and at last report was making 110 bbls. of 16.5 gravity clean oil from 1376 ft.

No. T-1, a test of lands immediately west of the Crestmont Pool in sec. 17, 28-29, jointly drilled by Crestmont Oil Co. and Trico O & G Co., was abandoned at 1842 ft. after finding the barren Vedder at 1829 ft.

South of Round Mountain production, Spartan Drilling Co. is cleaning out to fish drill pipe from Hiatt No. 1, at 2085 ft. hole in sec. 32,28-29.

Hancock Plans Union Ave. Try

With lease commitments calling for an early start, Hancock Oil Co. is considering drilling on the Union Avenue plunge property south of Bakersfield.

Located on sec. 6,30-28, the site is near many shallow tries and a 10,427 ft. well which Richfield Oil Corp. bottomed in lower Miocene during March 1939. It is believed that this well found the Stevens to consist solely of shale, and only poor sand bodies from 4500 to 5600 ft.

Paloma Outposts Near Production

The three-well Paloma field will soon be increased by two-thirds with Western Gulf Oil Co. and Ohio Oil Co. completing a well each. At opposite ends of the string of holes which now is the field, the new projects have already added much to the knowledge of the structure. Extending the field to the west is Ohio's B-3-23 which is standing with 7 in. casing cemented at 9945 ft. after topping the Stevens gas sand at that level. The "N" point was logged at 9860 ft., the highest in the field.

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
Fresno County					
Cantua Creek	The Texas Co., Everding	1	24, 17-15	9280	Drilling
Coalinga	Classen, W. J. & Assoc.	1	1, 21-14	100	Drilling
	Lewis, C. H.	1	18, 21-15	2298	Idle
	Tide Water Assoc. Oil Co., Guardian	23	2, 20-15	3731	Pumps water
Gatos Creek	Gatos Creek Oil Co.	1	19, 19-13	520	Drilling
Jacalitos	Continental Oil Co., Kreyenhagen	1	4, 22-16	9842	Drilling
Mendota	Jergins Oil Co., Cheney Ranch	1	29, 14-13	9345	Idle
Kern County					
Belridge—South	DeLanty & Sutton, Trustees	1	28, 28-22	3020	Idle
	Santa Mora Oil Co.	1	10, 28-20		Rig
Devils Den	Seaboard Oil Co., Beer	66	17, 26-19	7583	Drilling
	Trigg, H. C.	2	11, 11-11	940	Bailing
Edison	Goodrum & Vincent, Inc., S.P.	7	31, 29-30	460	Idle
	O'Reilly, Francis, Edison Land	2	5, 30-29	4103	Testing
	Wood-Callahan, Lubold	1	21, 30-29		Rigging up
Grapevine	Kern Line Oil Co.	1	19, 11-19	6110	Drilling
	Richfield Oil Corp., Tejon Ranch	1	2, 10-19	7645	Drilling
Mt. Poso	Crestmont Oil Co., Smith	1	11, 26-27	2504	Abandoned
	Signet Oil Co., Signet	1	36, 26-28	775	Idle
	Universal Cons. Oil Co., Villard	1	18, 26-28	1928	Abandoned
Richgrove	Borget, A. J., Kendall	1	16, 25-27		Rigging up
Round Mountain	Crestmont Oil Co., C-T	1	17, 28-29	1831	Abandoned
	Spartan Drlg. Co., Hiatt	1	32, 28-29	2085	Cleaning out
	Trico Oil & Gas Co., Coffee	4	8, 28-29	1376	Pumping 110b/d
Wheeler Ridge	Richfield Oil Corp. KCL	2	28, 11-20	8085	Drilling
Kings County					
Pyramid Hills	Tide Water Assoc. Oil Co., West Slope	31	20, 24-18		Location

Western Gulf's easterly outpost, KCL No. A-34-2, found the "N" marker at 10,211 ft. and the top of the sand at about 10,300 ft. but, with bottom at 10,448 ft., was delayed by a twist-off while reaming at 4500 ft.

Both wells indicate the structure is rising to the west and plunging to the east.

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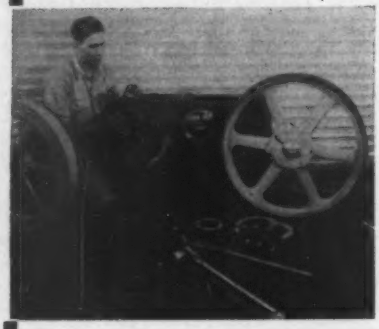

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Two Near Finish At North Belridge

Belridge Oil Co. will soon add two more wells to its string of big producers at North Belridge where No. 8 in sec. 1 is coring below 8140 ft. and No. 64 in sec. 35 is below 8000 ft. Both wells are so located in relation to structure that a difficult gas-oil ratio is expected. Not far behind the leaders is No. 15, sec. 35, which is nearing the 7900 ft. level.

Tide Water Plans Kings County Try

One location west of its Pyramid Hills discovery, Tide Water Assoc. Oil Co. plans to drill West Slope No. 31. Located in the northwest quarter of sec. 20,24-18, the well will attempt completion from the sands which made 40 bbls. daily of 16 plus gravity oil in the discovery West Slope No. 1.

Drilled in May 1940 as a core hole test, the original well was plugged back for test of promising zones above 950 ft. and from which, with 104 ft. open the pumper was completed. Production is obtained from lower Miocene sands thought to be Temblor. The sands are found here at shallow depth since the formation outcrops only a little farther west.

Coles Levee Leads State Activity

Yet maintaining its lead over all other California fields in number of working projects, Coles Levee has at the latest count 20 strings at work, rigs up for an additional 7 wells and foundations poured for two more.

Heaviest activity is carried by Richfield Oil Corp. and its contractors with 17 strings under way. Ohio Oil Co. runs two strings while Standard Oil Co.'s lone rig completes the list.

Development in this rich field is working up into the first slopes of the Elk Hills which lie due west of the present proved area, and which at the moment seem to be the unknown quantity in proved field limits.

No. Coalinga Well Misses Sand Bodies

Standard Investment No. 1-6B, which Tide Water Assoc. Oil Co. drilled as an extreme northerly Coalinga test, is abandoned at 9020 ft. Located in the northwest corner of sec. 6, 19-16, the well bottomed in siltstone after finding the Eocene sands absent at this location. It is probable, however, that had the sands been encountered they would have proved too low to be productive since the well, correlated on the Kreyenhagen, is 650 ft. lower than the most northwesterly Coalinga Northeast production.

At the south edge of Coalinga Northeast, Pacific Western Oil Corp.'s East Coalinga Comm. No. 1 shows promise of extending production a half mile to the south. Bottomed in Gatchell oil sand at 8115 ft. operators are running casing after marking top of the good sand at 8104 ft. Currently the most interesting of all the Coalinga wells, this completion will in a great measure clear up the ambiguities surrounding this sup-

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posedly narrow connecting neck between this field and Coalinga Eocene directly south.

Holding its place in state activity, the twin Coalinga area has at the moment 14 strings engaged in development work.

Gatos Creek Try Digging

Some ten miles west of the Coalinga west side fields, Gatos Creek Oil Co.'s well No. 1 in sec. 19,19-13 is drilling with cable tools below 520 ft. At last report the test was preparing to carry casing as insurance against caving shale bodies. Little is known of the geologic section here since this is the first test of the immediate area.

B. V. Hills Well Below 8000 Ft.

Honolulu Oil Corp.'s electric rig, drilling No. 25-P for a deep test of the Buena Vista Hills in sec. 10,32-24, is milling on junk at 8370 ft. Located high on the hills and believed to have been an excellent chance at finding commercial deep sands, the try encountered shale and sand showing oil near 6860 ft. and shale with evidence of gas at 7240 ft. Position of the showings is not clear, since streaks of gray sand and dark shale found at 6270 ft. and which may have been a Stevens zone equivalent have never been publicly identified.

Strand Test Below Stevens

Tide Water Assoc. Oil Co.'s KCL No. E-27-7, an attempt to establish Vedder zone production below the presently producing Stevens zone, in sec. 7,30-26 of the Strand field, is drilling in gray sand at 8706 ft. The first oil zone of the Stevens was found at 8286 ft. while bottom of the third zone oil sand was passed at 8530 ft.

Various California counties and municipalities are working on ordinances making it a misdemeanor to trespass on properties of vital industries.

T. H. Pike Jr. Joins Tube-Turns Corp.

T. H. Pike, Jr., who for a number of years represented the W. R. Guiberson Co. in California, has recently joined the sales staff of TUBE-TURNS, Inc., of Louisville, Ky. Mr. Pike will be district manager for TUBE-TURNS and will promote this company's line of fittings for pipe welding and forged steel flanges in the West Coast territory. Headquarters will be maintained in Los Angeles.

T. H. Pike, Jr.

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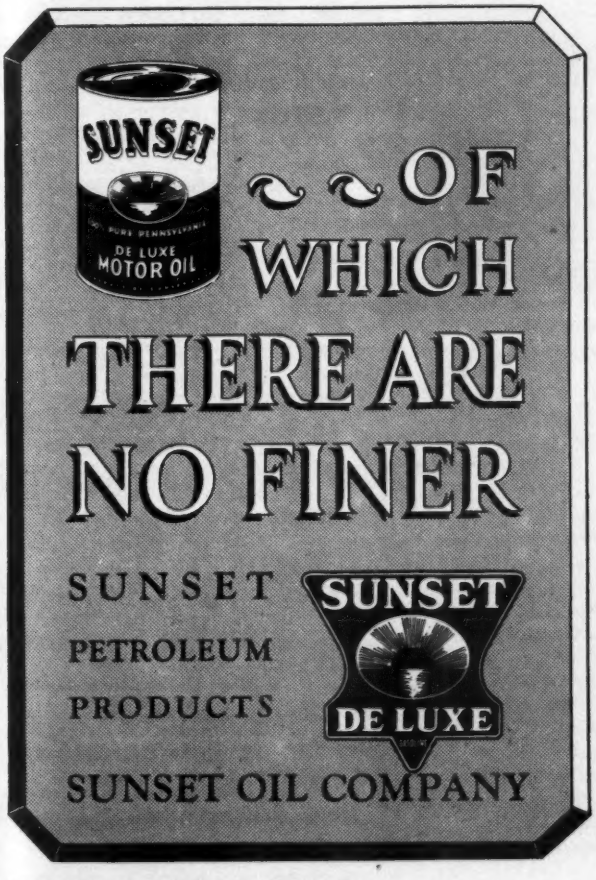

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Huasna Valley Wells Show Encouragement

Though it is believed no producible oil horizons have been encountered by either of the two wells now drilling in the Huasna Valley of San Luis Obispo county, both have had encouraging showings. Deepest of the pair is Superior Oil Co.'s Tar Springs Ranch No. 1 in sec. 24,23-14, now below 5828 ft. in hard Monterey shale, which has on occasion shown both oil and gas. Two miles to the north in sec. 11 of the same township, "Tex" Harvey Oil Corp. is nearing 1800 ft. and has been in hard brown shale with heavy oil in the fractures for the last 1000 ft. The showings in both wells are characteristic of the area, however, and do not necessarily indicate commercial production.

Shallow Project Tests Carpinteria

Lester L. Pedersen is cleaning out a 40 ft. hole at Carpinteria in hopes of developing a small amount of shallow production from sands of Temblor age which are reported to have carried oil in the interval from 8 to 25 ft. The "well" is located approximately 200 ft. north and 600 ft. west of the southeast corner of sec. 29,4-25.

Coal Oil Point Well Drills Below 1000 Ft.

After a slow start because of difficulty in getting away from the old holes, Bolsa Chica Oil Corp. is unofficially reported to be drilling its new Coal Oil Point try just below 1000 ft. No information is released by the company or by drilling contractor Karl Kellogg on this well and depth estimates must be arrived at by counting drill pipe.

South Mt. Well Will Retest

Possibilities of the easterly extension of South Mountain were unproved by the first production test of California Securities Oil Co. Schieferle No. 1 as after the first few hours mud and water appeared in the flow. With a 2000 ft. interval open from 2260 to 4260 ft., tubing was run to 4200 ft. and a packer set at 2200 ft. Indicating the presence of something more than the oil circulated while drilling and conditioning the hole, only thirteen swabs were required to start the well flowing at a rate estimated close to 700 bbls. a day. Little gas was in evidence but the gravity of the oil was said to be about 25 degrees which shows the entry of formation oil as that circulated was 19 degrees. The rate of flow diminished as increasing quantities of mud appeared and the flow stopped entirely after three days. Fearing that the bottom was the source of the trouble, the company at last reports was preparing to replug. Total depth of the hole is 4500 ft.

More than any recent well in Ventura county this well captured the fancy of the oil fraternity, two offsets having already been started and several other projects being in the formative stages. Farthest advanced is Comstock Petroleum Co. which is preparing to spud one location to the north while Bolling Oil Co. is erecting a derrick up the hill to the south.

Bardsdale Wildcat Rigging to Pump

The old Galveston Oil Co. wildcat on the Basola property, in sec. 5,3-19 between Bardsdale and Shiells Canyon, has been taken over and cleaned out by a new operator, American Seamless Tube Co. of Los Angeles. Drilled more than a year ago to 3139 ft., the hole encountered water and was plugged to 3000 ft. where tests recovered oil in small quantities. After standing idle for months, oil rose to the top of the casing encouraging further work. The new owner cleaned out the hole to 2920 ft. and is now rigging up for a pump trial.

Union Oil Co. Drills Santa Maria Valley Well

Attempting to push present productive limits of the Santa Maria Valley field to the south, Union Oil Co. is drilling its Bradley Lands No. 2-1 below 2650 ft. in sec. 36,10-34. The well is considered a semi-wildcat as little is known of the immediate area.

Union is continuing its development of the central portion of the field with two new wells on the Morrison lease and one on the McCoy-Cooney, all in sec. 27,10-34.

Hopper Canyon Well Cleans Out to Deepen

Only active project in Hopper Canyon at present is Signal Petroleum Co.'s Hadley No. 7 which it is preparing to deepen from about 900 ft. The well is located in sec. 13,4-19 not far from J. A. English's successful wells.

Sulphur Mt. Well Logs Oil Showing

Drilling Delpy No. 1 below 1000 ft., Madison Oil Co. is reported to have logged 20 ft. of oil sand below 640 ft. The well, located in the northwest quarter of sec. 24,4-22, is the first to be drilled in the Sulphur Mountain area in some time.

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
	Santa Barbara County				
Elwood	Bolsa Chica Oil Co., Permit	191–7	24, 4-29	595	Drilling
Summerland	Barnato Group, The, Hyland	1	16, 4-26	3277	Idle
	San Luis Obispo County				
Elkhorn	Calif. Pet. Prod., Irons	1	19, 10-24	2527	Idle
Huasna	Tex Harvey Oil Corp., Gilmore Comm.	1	11, 32-14	1750	Drilling
	Superior Oil Co., Tar Springs	1	24, 32-14	5828	Drilling
	Ventura County				
Bardsdale	Elkins, Reed	1	5, 3-19	738	Stdg. cem.
	Hopland Oil Co.	1	1, 3-19		Rig
	Westoil Corp.	1	6, 3-19	500	Drilling
Conejo	Sulphur Springs Oil Co., Janss	1	33, 2-19	4526	Prep. to deepen
Ojai	Seaport Oil Corp., Arnett	3	15, 4-21	2121	Idle
	Norwood Oil Co., Coronet	2	17, 4-21	1221	Redrilling
	Norwood Oil Co., Coronet	3	17, 4-21		Grade
	Per-Col Oil Co., Anlauf	6	21, 4-21	1877	Cleaning out
Santa Susana	K. C. Oil Co., Marr	1	32, 3-17	1716	Idle
Sespe	English, J. A., Lankershim	4	13, 4-9		Location
	G. E. Development Co.	7	13, 4-19	895	Idle
	Inter-Counties Fuel Co.	1	22, 4-19		Location
	Merchants Pet. Co., Cochrane	8	1, 4-20	2805	Cleaning out
	Riley, Irene Burson	1	18, 4-19	2050	Idle
	Rio Hondo Oil Co., Cosby	1	14, 4-19	1695	Idle
	Signal Petroleum Co.	7	13, 4-19	895	Cleaning out
South Mountain	Bolling Oil Co., Schieferle	1	17, 3-20		Bldg. rig
	Calif. Securities Oil Co., Schieferle	1	17, 3-20	4501	Plugging
	Comstock Pet. Co.	1	17, 3-20		Prep. to spud.
Sulphur Mt.	Madison Oil Co., Delphy	1	24, 4-22	1050	Drilling

Per-Col Oil Tests Santa Paula Project

Per-Col Oil Co. is making a production test in its Anlauf No. 6 in sec. 21,4-21 northwest of Santa Paula after landing 4½ in. casing, the bottom 300 ft. of which was perforated, at 1875 ft. and cementing through perforations at 1575 ft. Sufficient oil sand was encountered to indicate a small well may be obtained.

Five Rigs Active In Shiells Canyon

Five wells are now active in the Shiells Canyon field with O. C. Field Gasoline Co. and Santa Clara Petroleum Co. each drilling one near the 1000 ft. level while Consolidated Petroleum Co. is preparing to deepen old holes and The Texas Co. is rigging up a new one, Shiells No. 140.

Oilexco Grades Roads For Eureka Canyon Well

Oilexco, Inc., a new concern headed by Roy N. Ferguson, is grading roads in Eureka Canyon south of Piru where it plans to drill in the near future. The topography is very rugged making the road building one of the major costs of drilling in this territory.

STATEMENT OF OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, and MARCH 3, 1933.

Of California Oil World & Petroleum Industry, published semi-monthly at Los Angeles, California, for October 1, 1940.

State of California, County of Los Angeles, ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Walter C. Monroe, who, having been duly sworn according to law, deposes and says that he is the President and Business Manager of the California Oil World & Petroleum Industry, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, Walter C. Monroe, 765 S. Plymouth Blvd., Los Angeles, Calif. Editor, Walter C. Monroe, 765 So. Plymouth Blvd., Los Angeles, Calif. Managing Editor, None. Business Manager, Walter C. Monroe, 765 So. Plymouth Blvd., Los Angeles, Calif.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member must be given): Petroleum Publishers, Inc., 714 W. Olympic; Ward B. Blodget, 714 W. Olympic; Arnold K. Fitger, 530 W. 6th St.; A. A. MacDonald, 133 N. Las Palmas; M. K. Miller, Jr., 714 W. Olympic; Walter C. Monroe, 765 S. Plymouth Blvd.; Neal J. Norris, 714 W. Olympic. All of the above are Los Angeles, California addresses.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above is: (This information is required from daily publications only.)

WALTER C. MONROE
(Signature of business manager)

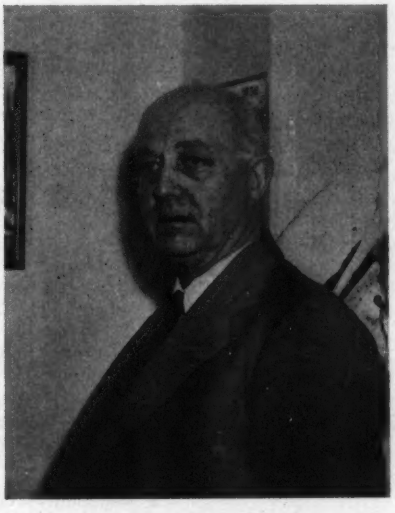
Sworn to and subscribed before me this 25th day of September, 1940.

(SEAL) IRMA E. COMSTOCK.

(My commission expires Nov. 9, 1943.)

J. B. Case Dies Suddenly in L. A.

J. B. Case, chief deputy supervisor of the Oil & Gas Division of the California Bureau of Mines, died suddenly October 5, at his Alhambra home. Although Mr.



J. B. Case

Case's health had been failing for several months, he had been working strenuously up to the day before his death, and none of his associates suspected the seriousness of his ailment.

Mr. Case was born in Nebraska in 1880 and came to California in 1893. His education was received at Garden Grove Grammar School, Fullerton High School, and the University of California, College of Mining, where he received his degree in 1906. Mr. Case was employed by the Arondo Gold Mining Co. in 1907, and in 1909 he went to the Columbia Oil Producing Co. at Olinda. In 1917 he became an inspector of the Oil & Gas Division of the State Mining Bureau, in Los Angeles. In 1918 he was transferred to Taft as petroleum engineer. In 1919 he was appointed deputy supervisor at Coalinga, and in the following year he was made chief deputy.

Barnsdall Finishes Newhall-Potrero Well

With initial gauges registering a flow of 1800 bbls. a day, Barnsdall Oil Co. brought in its No. 13 on the Rancho San Francisco property as the most northwesterly producer in the Newhall-Potrero field. Producing only the third zone, only 250 ft. of formation is open to bottom at 7217 ft. Other active projects on the property are No. 14, drilling at 5750 ft., and No. 15 which is preparing to spud in.

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George B. Shields, Secretary & Treasurer
P. W. Boggs, Assistant Secretary & Treasurer
C. J. Gibson, Drilling Superintendent

LAUGH THIS OFF

It's just 448 years this week since Columbus discovered America. It's hard to believe that we could make such a mess of it in such a short time.

Incidentally, we have always felt that altogether too much fuss was made over this guy Columbus. With all the hooraw that goes on in this country, especially in an election year like 1492, it wouldn't take very keen perception to discover the place.

And speaking of elections, **Walt Perris** says you will sure be well advised to take your campaign speeches with a grain of salt. He claims that the wool the politicians pull over your eyes is even half cotton.

Which reminds us of **Dave High's** oft repeated epigram, "Man's inhumanity to man makes a guy scared to death to step off the sidewalk."

There is the tang of salt sea air in this epic of the briny next recited by that old petroleum mariner, **Bill Sievers.** It concerns a ship christening that took place recently in an eastern seaport that for diplomatic reasons must remain unknown: A young gentleman with ambition and an insatiable thirst abstracted the champagne that was being reserved for the ceremony, and substituted some of his own home brew. When the bottle was later smashed on the hull of the ship, it immediately ate a prong off the anchor, and made two unauthorized portholes on the lower deck.

Roy Pickens next tells of the rousty who gave his home brew the electrical test. He tried to run 20,000 volts through the potent concoction, but it was promptly chased back to the generator.

During the course of the Union Oil Refinery golf tournament last week, five divots were observed flying in V formation high over Inglewood.

After watching the performance of a field department visitor caught in a bunker, **Herb Hemmen** says you could tell he was a driller by the way he was going after the deep sand.

At the banquet in the evening, the boys all chipped in and bought Herb a bouquet of California poppies. He felt pretty good about it until he learned the significance of the gift. It seems that California poppies always shut up at sundown.

On a similar occasion, a nautical magazine comments as follows, "The ship was christened by the Countess Kabibble, who smashed a bottle of champagne over her stern, and slid gracefully down the ways."

Returning again now to the sea urchins, **Gil Almquist** was cruising around Balboa Bay recently, when a small boy in a kayak offered his services as pilot. "Do you know where the sandbars are?", asked Gil, and the kid replied with a hesitating negative. "Well, what makes you think you're a pilot?", continued Gil, and you could have keelhauled him with a marlin spike when the young seaman piped, "Cause I know where they ain't".

By the way, when **Jim Foster's** boy pleaded, "Tell me the story of the Forty Thieves, daddy", Jimmy reneged as follows, "No no, son, you're too young to bother about politics".

With which few remarks we subside into a welcome silence. Remember, if you are ever foolish enough to depend on a verbal agreement, some day you will find yourself drawing a verbal salary.

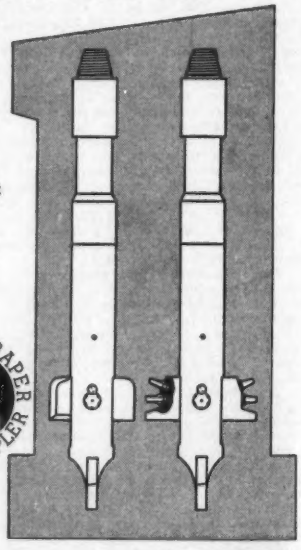
And says the Huntington Beach pumper, "This guy pokes a gun in my ribs, so I grabs him by the wrist, and the first thing he knows I'm laying on my back".

And while silence is golden we go temporarily off the gold standard during the pre-election weeks.

HOW MANY TIMES

HAVE YOU NEEDED A TOOL FOR:

- ★ Cutting Out Sections of Drillable Pipe
- ★ Enlarging Holes for Casing
- ★ Enlarging Holes for Gravel Packing
- ★ Bottlenecking for Cement Jobs
- ★ Cleaning-Up Oil Sands
- ★ Straightening Crooked Holes
- ★ Setting Liners
- ★ Water Shut-Off Tests



Send for Baker Broadcast No. 19
See Pages 252 to 261 of the 1940 Composite Catalog.

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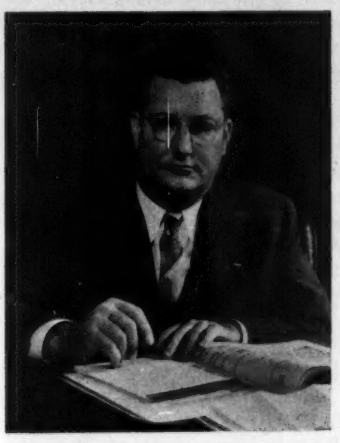
Box 3048, Houston, Texas
EXPORT SALES OFFICE: 19 Rector Street, New York, N. Y.

Dresser Mfg. Acquires Pacific Pump Works

Of interest to the refining, producing and pipe line divisions of the oil industry is the announcement by the Dresser Manufacturing Co. of their acquisition of the Pacific Pump Works. The Dresser Manufacturing Co. is well known throughout the oil industry, having been organized in 1880. It manufactures pipe couplings, sleeves and repair devices for the construction and maintenance of pipe lines. Head office and plant are located at Bradford, Penna.



R. E. Reimer

A. R. Weis

Pacific Pump Works, established in Huntington Park in 1924, has become well known through their manufacture of various types of centrifugal pumps for refineries and boiler feed water plants. They also produce turbine pumps for water wells and deep well plunger pumps for oil field production.

Other subsidiaries of the Dresser organization include Clark Bros. Co., Inc., of Olean, New York, manufacturers of gas and diesel engines and compressors, and The Bryant Heater Co., of Cleveland, Ohio, manufacturers of gas heating and air-conditioning equipment. The combined personnel of all organizations will run well over 1500 people. Outside of changes announced in management personnel and directorate, the operations of the Pacific Pump Works will continue on the same basis with no variation of company policy.

J. B. O'Connor, vice-president of Clark Bros. Co., Inc., will serve as chairman of the board of directors. A. R. Weis, formerly vice-president of Pacific Pump, was elected president of the California company, and R. E. Reimer, treasurer of Dresser, has been named the secretary-treasurer. Directors include J. B. O'Connor, A. R. Weis, H. N. Mallon, C. P. Clark and R. E. Reimer, of Dresser.

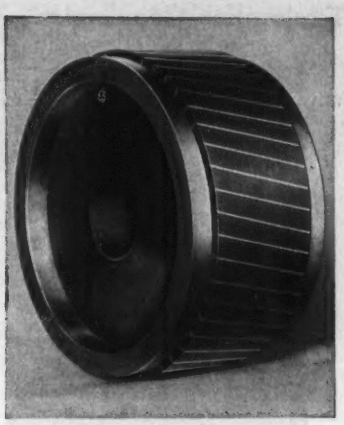
Mr. Weis in commenting upon plans of the company for the future said, "It is our belief that this move is of benefit not only to the companies directly affected but to the industry which we serve as well. The Dresser Manufacturing Co. and Clark Bros. will now have a Pacific Coast plant and organization, while the Pacific Pump Works will benefit through plant and sales representation in the east on a much broader scale than was possible heretofore. The company will continue to be operated as a separate unit. Our many customers throughout the United States and in foreign fields are assured of a more complete line of products to satisfactorily meet their requirements and of the strongest possible service organization."

R. E. Reimer, in commenting upon immediate plans of the Pacific Pump Works said, "While we are not in a position to make any definite announcement at this time, definite expansion of the Pacific Coast facilities are being considered. We believe from contacts we have already made with the oil industry at large that the consumation of arrangements as announced are welcome by our customers." Mr. Reimer went on to point out that the new set-up will in no way affect the manufacturing or sales operation of the Pacific Pump Works in either California or the Mid-Continent fields as far as turbine or deep well plunger pumps are concerned.

Fairbanks-Morse Announces New Cast Copperspun Rotor

The new one-piece centrifugally cast indestructible Copperspun rotor developed by Fairbanks-Morse marks another milestone in the perfection of industrial electrical equipment.

Fairbanks, Morse & Co. pioneered the ball bearing motor, later contributed largely to the development of fan cooled, splash proof, and hollow shaft vertical



motors, and now announces another major development—the F-M Copperspun Rotor. This new rotor construction represents years of experimental engineering with but one objective in mind—to obtain the best possible rotor for service under the constantly increasing tempo of modern mass production schedules. The F-M Copperspun rotor leads the field, a truly one-piece indestructible rotor with high electrical conductivity, low thermal expansion, and high mechanical strength even under abnormal temperatures, the makers claim.

The advantages claimed are a truly one-piece indestructible rotor winding especially adapted to severe service such as plugging or reversing duty which demands greater mechanical strength and abnormal temperatures. A copper rotor winding with inherently high electrical conductivity and low thermal expansion. Accurately machine finished surfaces. Desirable and necessary mechanical charateristics insured by a centrifugally cast temperature controlled manufacturing process. High melting point of rotor winding. Dynamically balanced to a high degree of accuracy after assembly.

The new rotor lends itself particularly to totally enclosed motors with the higher inherent operating temperatures than normally found in standard motors of the open type. The explosion proof motor illustrated is not only supplied with the new copperspun rotor but double end ventilation, an exclusive feature in F-M explosion proof motors resulting in an exceptionally efficient cooling system with a reversible conduit box position and standard motor dimensions interchangeable with open machines, and where required double shaft extensions with same overall shaft length as in open motors.

Sealed ball bearings in cartridge type housings insure trouble-free operation.

Heavy body permanently plastic moisture, oil, and acid resisting specially developed insulating compound is applied to all stator windings.

"Exploration Geophysics"

By Dr. J. J. Jakosky

"Exploration Geophysics," an authoritative volume of approximately 800 pages

and 430 illustrations, which describes the fundamental theories, equipment and field technique of the recognized exploratory geophysical methods and illustrates their application to problems of economic geology, is now available.

Its author, Dr. J. J. Jakosky, M.E., E.E. and Sc.D., is one of the leading geophysicists of the country. Written for geophysicists; geologists; teachers; physicists; petroleum, mining and civil engineer; supervisors and production men of oil and mining companies, and directors of public works; patent attorneys; prospectors; and the general public, "Exploration Geophysics" is unequalled in completeness of authoritative information and clarity of expression, and differs greatly from other texts on geophysics because of its detailed and practical descriptions of contemporary geophysical techniques and instruments, and in the large number of examples of commercial surveys.

Each chapter of "Exploration Geophysics" was prepared in collaboration with geophysicists with extensive experience in their particular techniques, and their excellent cooperation makes the book up-to-the-minute in every detail. The book is obtainable from Times-Mirror Press, 110 South Broadway, Los Angeles, California.

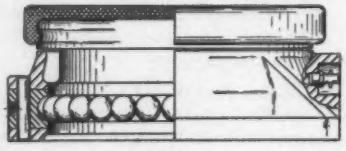
Spinning Table Aids Make Up of Joints

A new device for use in making up threaded connections of Reamers, Fishing Tools, Subs, Bits and other members in the drill string, designated the Baash-Ross Spinning Table, is announced by Baash-Ross Tool Co., 5512 Boyle Ave., Los Angeles, Calif.

The Spinning Table fits in the square at the top of the master bushings in the same manner as a bit breaker or hole cover presents a rotatable surface upon which to rest the tool in a central position under the vertically hanging drill collar or drill pipe.

The Baash-Ross Spinning Table consists of a square steel base with a ball race machined near the top on the inner surface and a circular table with a downwardly projecting flange of smaller diameter than the top of the table, also machined to form a ball race. Large-diameter balls, inserted through a small side opening after the base and table are together, form a bearing for retention and also hold the two parts together. The side opening is closed by a threaded plug. The top of the table is covered with renewable, non-skid, non-metallic cover which presents an excellent surface upon which to rest the reamer, fishing tool or other member while it is being added to the drill string.

In operation the Baash-Ross Spinning Table is placed in the square at the top of the master bushing which locates it concentrically over the hole. The tool to be made up in the drilling string is placed upon the rotatable table with the pin or box thread in line with the threaded connection of the drill collar or drill pipe hanging vertically in the elevators. As the drill collar or drill pipe is gradually lowered, a member of the crew easily rotates the tool upon the Spinning Table in order to start the thread. It is unnecessary to use chain tongs in order to rotate the tool upon the spinning table as the large lubricated bearing, formed by the balls and ball races, allows the table to turn very freely. Also, it is not necessary to rotate the drill collar or drill pipe in the elevators, as is often done when the tool is raised on the floor beside the rotary table, and the drill collar or pipe is pulled over at an angle while the joint is being made up.



The manufacturer claims that the use of the Baash-Ross Spinning Table permits safety in making up reamers, fishing tools and other members in the drill string, and that this work is done much more quickly than by the old method; as the threaded connections are in vertical alignment while the joint is being started, the possibility of damage to the threads or shoulders through accidental cross-threading or sharp blows is avoided; and that one or two men can make up the heaviest tool quickly and with ease. The resilient, non-skid covering on the upper surface of the spinning table prevents damage to the lower connection of the tool and keeps the tool from slipping out of position.

The Baash-Ross Spinning Table is of all steel construction and is designed for ample strength to support the heaviest loads encountered in this type of service. Tools can be lubricated by means of an ordinary grease gun.

Complete information is contained in a new bulletin which will be sent upon request.

"Oscar" Mee Retires After 45 Yrs. With S. O.

Retiring after 45 years of continuous service with the Standard Oil Co. of California, J. A. "Oscar" Mee was given a rousing send-off by 50 fellow employes at a party at his home in Alhambra on the evening of Oct. 2.

Mr. Mee joined the company in 1896 as warehouseman at the North Spring St., Los Angeles, Distributing Plant. In 1898 he became shipping clerk at this plant and three months later he was made plant foreman. In 1918 he became superintendent of the North Spring St. Plant, which position he held until his retirement on Oct. 1, this year.

Die-Formed Junk Basket Features Ease of Operation

The Cooper Die-Formed Basket is claimed by the makers to be a "sure fire" fishing tool for picking up loose junk in the hole, without the necessity of making hole or rotating. The operation of the basket is relatively simple. It is run to the bottom and weight is applied to a series of die - steel fingers around a steel die, forming a perfect arc. As the fingers are forced through the die in the opening of the head, they scrape the bottom of the hole in making the arc, forming a basket, and all that is necessary is to come out of the hole.

The distributors, Liberty Oil Tool Co., 1095 East Wardlow Road, Long Beach, Calif., say that at no time has the tool been on the bottom over three minutes and has yet to record a failure.

The tool consists of a sliding kelley set with four 4000-lb. shear pins to prevent closing the fingers when encountering sand bridge. The bottom of the tool is toothed to permit drilling through bridges. When the tool is on bottom, weight in excess of the strength of the shear pins is placed on the string causing the kelley bottom to engage collar on top of the basket fingers, pushing the flexible steel fingers through the die bottom to enclose all junk at the bottom of the hole.

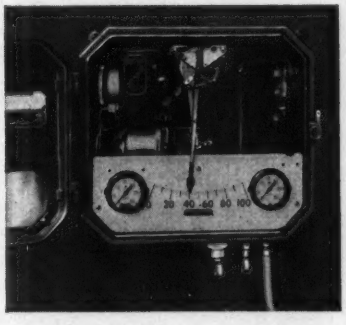
Simplicity of operation is another advantage claimed for the Cooper Die-Formed Basket, eliminating the need for specially trained men. In the Valley fields, operators may be supplied with the tool by Dunlap Welding & Bit Works at Bakersfield and Avenal. Coastal operators will be served by G. W. Wiggett in Ventura.

Taylor Remote Pneumatic Transmission Systems

A simple, accurate and in many instances the only practical and economical means of indicating, recording or controlling process variables remote from the point of measurement is offered by the new Taylor Remote Pneumatic Transmission Systems. This new system of remote transmission is particularly advantageous where it is desirable to correlate temperature, pressure, flow or liquid level data on a centralized panel or in a control room.

The system utilizes standard Taylor instruments. It may consist of one or two transmitters connected to a receiver; or one or more receiving instruments, not necessarily near each other, and as far as 1,000 feet from the transmitter. Transmitters or receivers may be indicating, recording or controlling types. Air pressure is the transmitting medium, with ¼" O.D. copper tubing as the means of connection.

Taylor Remote Pneumatic Transmission Systems are highly accurate—well within ± 1% of the scale range when properly installed. The speed of response of the receiver to changes in output air pressure from the transmitter is largely dependent upon distance—the maximum lag being one second per hundred feet of connecting tubing.



Taylor Indicating Transmitter

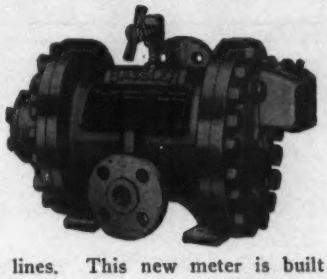
The new Taylor system eliminates the hazards of electrical transmission by doing away with electrical circuits in explosive atmospheres. It measures, transmits and receives continuously regardless of electrical current failures.

For the operator out on the unit, it provides an indicating or recording instrument for observation and eliminates the necessity of returning to the main control board to check the performance of the unit.

Write to the Taylor Instrument Companies, Rochester, New York for Bulletin No. 98156, which describes the many advantages of the systems in the measurement and control of pressure, rate of flow and liquid level.

Smaller Bassler Meter Announced by S. F. Bowser

S. F. Bowser & Co., Inc., have announced the addition of a new 1-inch Bassler meter, which is especially designed for measuring the production of individual oil wells, or for use on gathering lines. This new meter is built to withstand pressures up to 1,000 pounds per square inch—to readily handle flows direct from the well.



With the increasingly widespread use of meters for measuring oil production, a meter of this type has been much needed. The new size augments the otherwise complete line of Bassler meters, which are made in numerous sizes, capacities and pressure ranges for use on pipe lines, trunk lines, in refineries, on barges and tankers, etc.

Avenue Outpost Flows On Test

Deepened 102 ft. to 7657 ft., Calif. Alliance Pet. Corp. Hartmann Ranch No. 1 is flowing at press time at an estimated 600 bbls. daily rate through formation tester. The well is a northerly outpost in the Avenue Section of the Ventura Avenue field.

A. P. I. Drilling Committee Meets

California Topical Committee on Drilling Practices held a meeting at the Los Angeles Athletic Club October 8. J. G. Creed, Halliburton Oil Well Cementing Co., spoke on "Bulk Cementing". T. A. Atkinson, General Petroleum Corp., is chairman of the drilling practices committee.

Attempt to head off the sale in this country of oil produced from wells expropriated by the Mexican government is reported to be the real purpose behind a bill, S3936, which has already passed the Senate.

Business and Professional Directory

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Large maps of Los Angeles Basin oil fields and map showing all California oil fields. Price $15.00 each on paper and $20 each on cloth. Individual state oil and gas maps of Mid-Continent and Rocky Mountain regions. Maps show geological cross sections at base. These maps indicate wells drilling, wells producing and abandoned, with depths.
All maps revised up to date of purchase.
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Wilson Atlas Model Draw Works and Transmission with Automatic Cathead.
2—Waukesha Model LSU 225 H. P. 6 cylinder Engines—equipped to run on Natural gas or Butane.
7¼ x 18 Wilson-Snyder 3000 pound Power Pump, fully equipped.
27½" Oil Well fully enclosed Oil Bath Rotary Table.
66" - 5 sheave Union Tool Roller Bearing Travelling Block.
8" Wigle Spring Hook.
6" 150 ton Oil Well type B Swivel.
6 Sheave Emsco Double Deck Roller Bearing Crown Block.
6¾ x 14 Oil Well Power Pump and PA-100 International Engine mounted as Stand-by unit.
Martin-Decker Quintuplex Weight Indicator.
McNeely Model 4-D-4 Mud Shaker.
Wilson Utility unit with 7½ K. W. Generator (for lighting rig and running mud shaker). Powered with Buda model H-217 gas engine.
Baroid Mud Tester, Stand Pipe, Butane Rack, Steel Sub Structure.
All of this equipment is in perfect condition and ready to run. Recommended for drilling up to 8,000 feet.
Call or write
H. & B. SALES CO., Ltd.,
2875 Cherry Avenue
Long Beach, California
Phone Long Beach 416-59

The best proof that even the smallest advertisement in the California Oil World is read, is that you are now reading this.

Oil Men's Calendar

Calif. Natural Gasoline Association. **Los Angeles Chapter**—Meets 1st Thursday Each Month, Barker Bros. Bldg., Los Angeles—Dinner at 6:00 (Optional). **Taft Chapter**—Meets Third Thursday Each Month.

American Society of Mechanical Engineers—Los Angeles Section—Meets 2nd Thursday Each Month—Barker Bros. Bldg., Los Angeles. Dinner at 6:30 (Optional).

October

7-10—American Gas Association, Atlantic City, N. J.

7-11—National Safety Congress and Exposition, Stevens Hotel, Chicago, Ill.

12 — Automobile Manufacturers Assn., 1940 Auto Show, New York.

14—Society of Automotive Engineers, Annual Dinner, Hotel Commodore, New York.

15—National Stripper Well Association, Dallas, Texas.

16-18—Independent Petroleum Assn. of America, 11th Annual Meeting, Dallas, Tex.

17-18—American Institute of Mining and Metallurgical Engineers, Petroleum Division, **Los Angeles, Calif.**

24-26—American Institute of Mining and Metallurgical Engineers, Petroleum Division, Tulsa, Okla.

31-Nov. 2—Society of Automotive Engineers, National Aircraft Production Meeting (and Engineering Display), Biltmore Hotel, **Los Angeles, Calif.**

November

1—California Natural Gasoline Assn., **Fall Meeting, Los Angeles, Calif.**

7-8—American Association of Petroleum Geologists, Pacific Section, **Los Angeles.**

11-15—American Petroleum Institute 21st Annual Meeting, Stevens Hotel Chicago, Ill.

December

2-6—American Institute of Chemical Engineers, New Orleans, La.

9-14 — National Asphalt Conference, Dallas, Texas.

Report Government Will Act on Tidelands

Following a series of conferences between California representatives of the oil industry, Attorney General Jackson, and Secretary of the Navy Knox, it is reported from Washington that the Department of Justice is preparing to institute a suit against the State of California over the ownership of the disputed tidelands oil deposits. Considerable interest has been shown in administration circles over the outcome of the Justice Department's proposed suit against California, and it is thought that an opinion on the matter probably would be of the "now or never" variety, before the Presidential elections are held on November 5. The administration takes the stand, it is reported by a Los Angeles Times Washington correspondent, that California is in a weakened position because of its unique place in the Union. Because of the Spanish background of the state, it is expected that government experts will argue that California is not on a parity with other states in the Union, and that the laws applying to ownership of offshore lands do not concern the state which was taken over from Mexico and Spain. The Justice Department is reported to feel that a suit against the State of California could very easily be carried through on the basis of national defense.